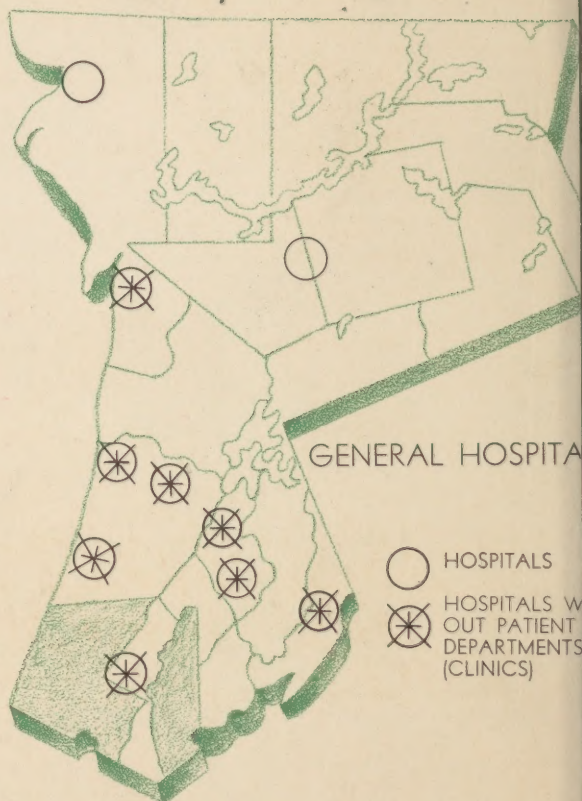
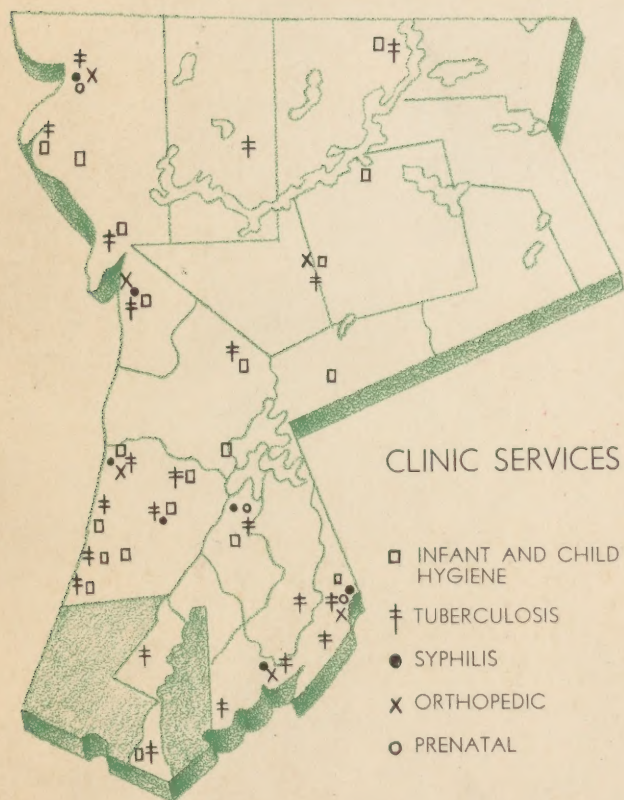
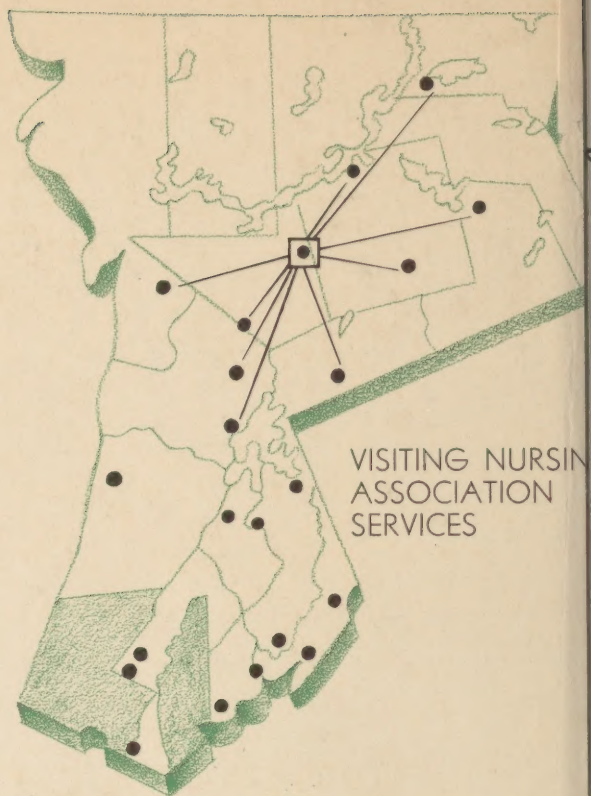
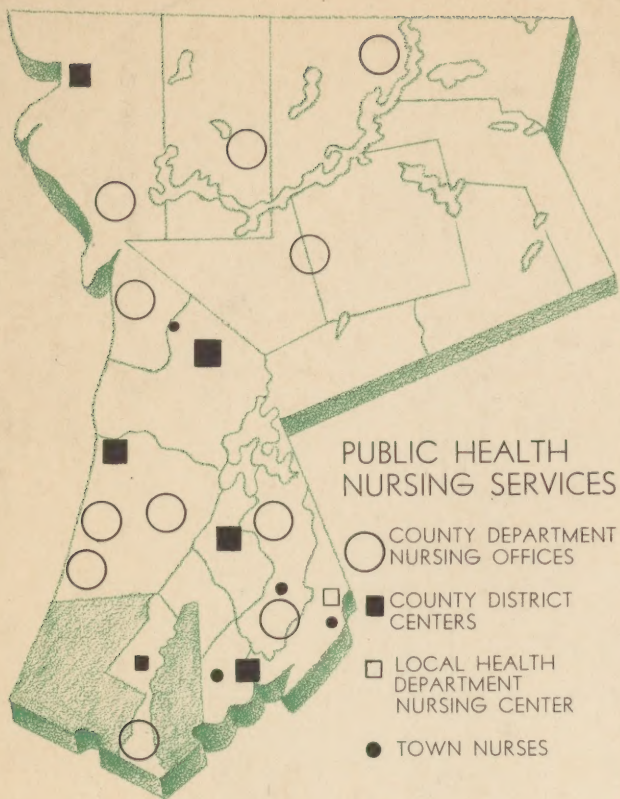


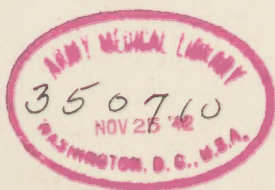
FORWARD TO HEALTH





FORWARD TO HEALTH

THE STORY OF TEN YEARS IN WESTCHESTER'S PROGRAM
FOR A HEALTHIER COMMUNITY



WHITE PLAINS, N. Y.

THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH

1941

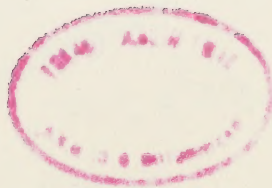
WA

546

AN6.1

W5D4f

1941



COPYRIGHT, 1941

by the

WESTCHESTER COUNTY DEPARTMENT OF HEALTH

All rights reserved

CONTENTS

	PAGE
LIFE'S IN THEIR HANDS	5
WHY THE HEALTH DISTRICT?	7
GOOD NEIGHBORS	12
THE NERVE CENTER	17
THE NURSE	20
THE QUARANTINE SIGN	24
IMMUNITY THROUGH THE NEEDLE	30
SENTINELS OF HEALTH	34
THE SUBTLE KILLER	43
SYPHILIS, THE SABOTEUR	50
THE LAME, THE HALT	56
BORN TO LIVE	60
APOSTLES OF HEALTH	65
DOLLARS AND LIVES	68

WHERE AND WHY

THE DEPARTMENT OF HEALTH serves all of Westchester County except the cities of Mount Vernon, New Rochelle, and Yonkers. The health district is 457 square miles in size, 30 miles long and 22 miles across at its widest point.

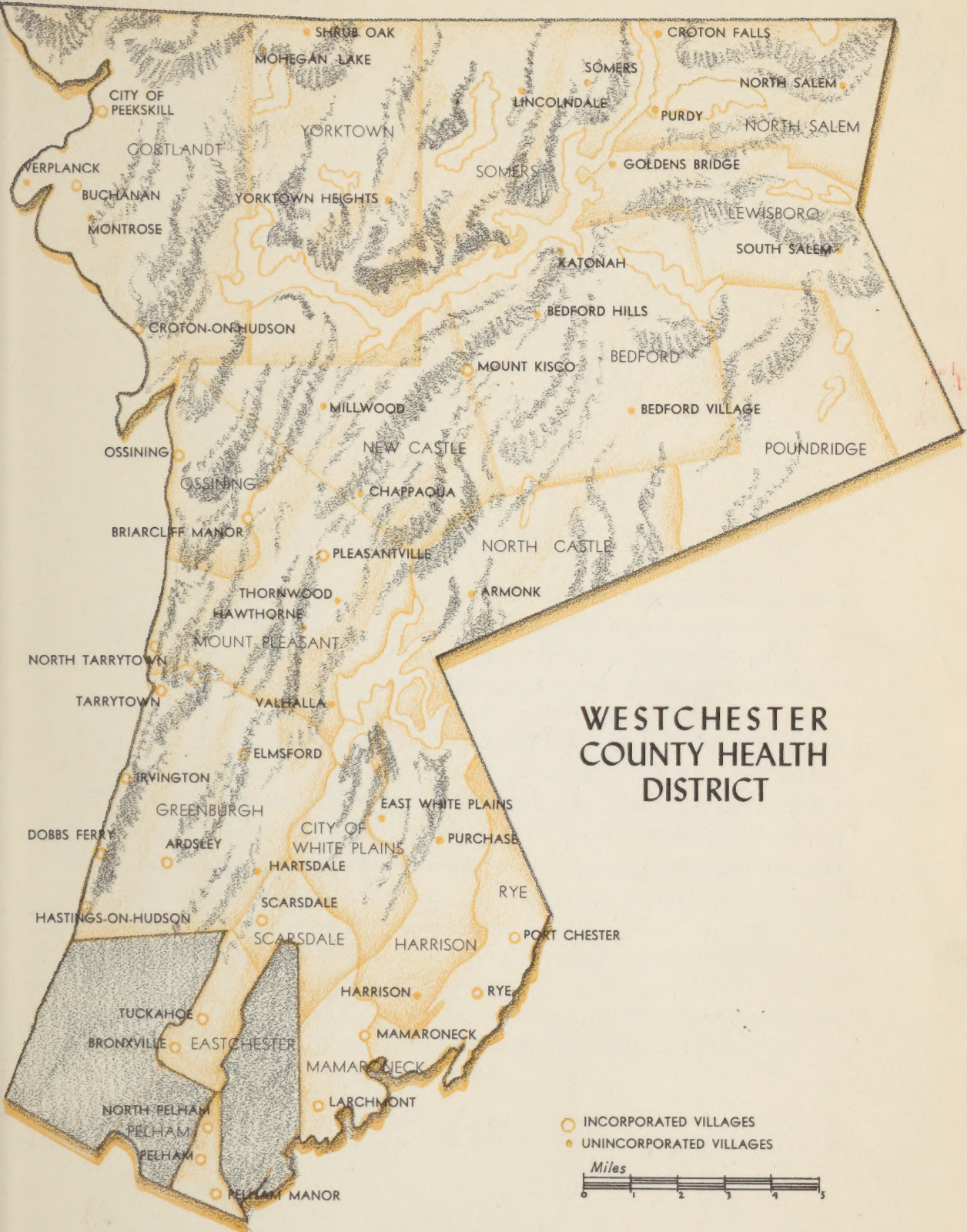
POPULATION was 301,975 in 1940, a little more than half the county total. The district's people increased 33,569 during the first ten years of the health district, from 1930 to 1939. Between 1920 and 1929 the increase was 104,510.

DENSITY of population is a factor in public health. Westchester's is uneven. In the south are towns in which 10,000 persons are crowded into a square mile. Along the Hudson are industrial and residential centers, with 2,000 to the square mile in some places. In the north the country is rural, with areas containing less than 100 to the mile. The health district includes two cities, White Plains and Peekskill.

WEALTH is a factor in health. Westchester is the richest suburban county in the nation. Its assessed valuation of real estate in 1940 was \$1,585,000,000, a higher figure than for any other suburban county. Twenty-two per cent of its families have incomes of more than \$200 per month as compared with 15 per cent of families in New York State as a whole.

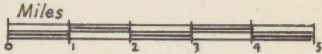
POVERTY is another factor in health. Figures are not available for the health district, but during the last five years of the thirties an average of more than 11,000 persons were on home relief and 6,500 persons on W.P.A. in the whole county. Probably a little less than half of these were in the district.

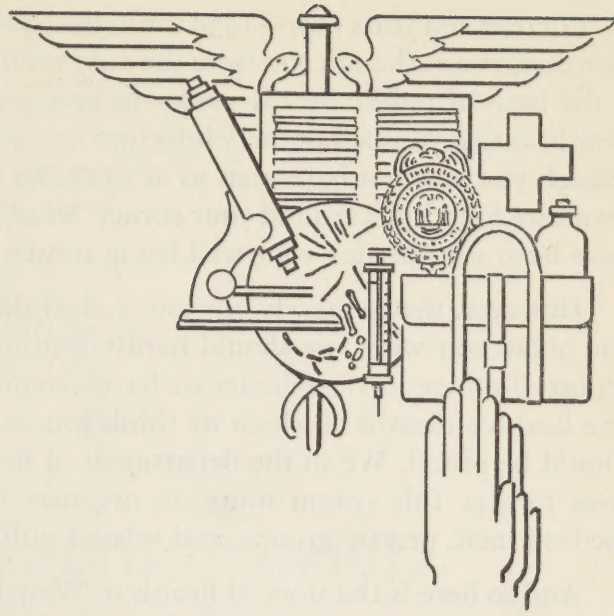
COMMUTING is a distinctive feature of suburban life. But more persons living in Westchester are employed here than catch a train or drive to the city each morning. In 1935 there were 221 factories employing 9,172 persons, 4,662 retail stores employing 11,900, and 123 wholesale houses employing 974. Living on the county's 795 farms and estates were 6,172 persons, and—surprisingly—173 were engaged in mining.



WESTCHESTER
COUNTY HEALTH
DISTRICT

- INCORPORATED VILLAGES
- UNINCORPORATED VILLAGES





LIFE'S IN THEIR HANDS

GENTLE fingers of a nurse show a new mother how to care for her baby, and another citizen will grow up without the ills that recently were common in childhood. Nimble fingers of a white-clad physician guide the needle that pricks lightly into a boy's arm, and another child has been saved from smallpox. Trained fingers apply their test-tube learning to specimens of milk and of water, and disease is tracked down before it can do its harm. Busy fingers play a symphony on typewriters and coding machines, and the ailments of a county's residents are recorded in a central office to steer public health workers in the fight against disease.

This is the work of public health, an art that organizes the efforts of individuals trained in many specialties into one cohesive program for longer and better lives. All these fingers—and the hands and brains that guide them—are working in the Westchester County Department of Health's main office in White Plains or in one of its six health centers. If you are one of the 301,975 residents of the forty-one cities, towns, and villages that make up the Westchester health district, these fingers are on guard for your personal well-being.

For over ten years now—1930 through 1940—these fingers have been guarding you as though you were the only resident of Westchester. That is the basis of public health work—to keep you, individually, in good health, so that you cannot carry infection to your neighbors. And so, even though you may not have seen us at work nor even known about those germs we found just around your corner, we of the department of health have been working for your well-being constantly.

However, that is merely our job; and, if that were all we had to tell you about our work, we should hardly venture to ask you to read this report. But here in Westchester we have a community system of cooperative health endeavor of which we think you, as a resident of the county, should be proud. We in the department of health are your representatives to give this system unity, to organize into the health program medical men, private groups, and related public agencies.

And so here is the story of health in Westchester, and the evolution of the health district during its first decade. Read it as the story of a thousand daily battles against germs that add up to a major and total war, in which you and your family are the civilian shock-troops behind our front-line trenches. Read it, too, as the drama of your life—from birth through all the ages. Then, when you see in how many countless ways public health service eases your way through life, perhaps you will say with us that we are going

“Forward to Health.”

GEORGE H. RAMSEY, M.D.
*Commissioner, Westchester County
Department of Health*



WHY THE HEALTH DISTRICT?

WESTCHESTER's people have always been reasonably healthy, by national standards; but there were sore spots in the health map of the 1920's that vexed thinking citizens of the county.

Westchester could see that it had congested residential and industrial areas in the cities and open country to the north, a distribution of population that requires widely varied types of health service. It saw, besides the landscaping along its beautiful parkways, sections that offered disease a fine haven.

And, too, Westchester saw its thousands of commuters come home from New York each weekday night, and thousands of motorists throng to its parkways each week-end—potential spreaders of disease that brought Westchester's health rates always within the influence of outside communities. Truly, Westchester, despite its many advantages, faced difficult problems in the struggle for life and health.

But the county that had pioneered in model highways, built magnificent amusement centers and top-grade schools, certainly was not going to fall behind in health standards. The question was—how can these standards be met and maintained?

To wipe out all disease germs is manifestly impossible. The only successful strategy of combat is organization, through which the knowledge and equipment of science can protect the public health. But before 1930 Westchester did not have such organization; it had forty-three "generals" fighting its war against disease. Few of these heads of local health boards had sufficient troops to win engagements by themselves, yet few were willing to join forces against a common enemy. It was each man fighting his own war—and a part-time war at that, since health officers were not required to devote all their time to the jobs.

Some of them had reasonably good equipment and man power. Some had none of either. For, though the state law provided that each community have a health officer with requisite medical training, it said little about staff or equipment.

So they fought their little part-time wars, these forty-three Westchester "generals" of the 1920's—fought them in a haphazard way, with quarantine signs, with vaccinations, with an occasional eye to water and milk supplies.

To be sure, they had a certain amount of help from the state. From 1914 on, the state health department provided full-time district health officers. But Westchester was grouped in a district with several adjacent counties that had essentially different problems. (Under the present organization, Westchester forms a state district with the Long Island counties of Nassau and Suffolk which, because of the character of their populations and their proximity to New York City, have similar suburban problems.)

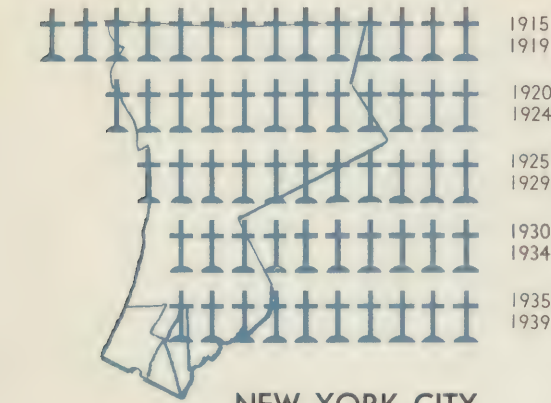
The state health officers of a decade ago, with such large and diverse areas to cover, had to limit their work. They fought the diseases such as smallpox, typhoid fever, scarlet fever, diphtheria—ills which one person "catches" readily from another. Essentially they were trouble-shooters, darting into a community when an emergency made their skills invaluable.

The federal government also lent a hand. The Venereal Disease Act of 1918 gave the states money for clinics and lectures. The 1921 Sheppard-

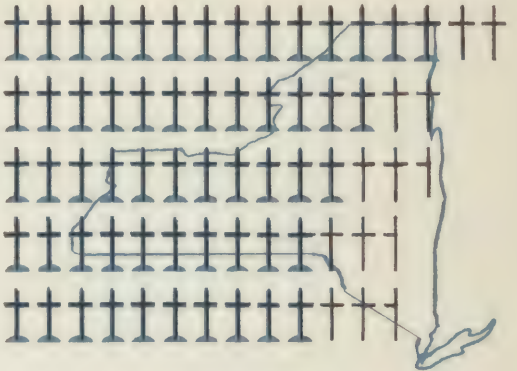


RECORDED DEATH RATES FROM ALL CAUSES

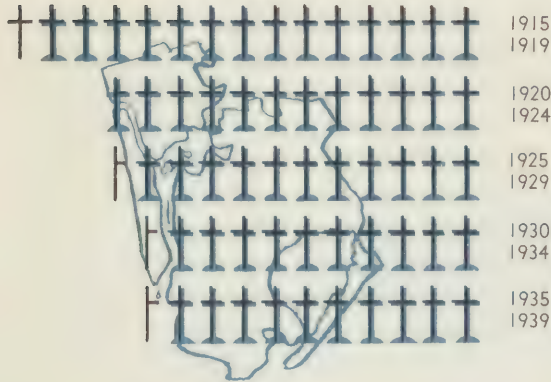
WESTCHESTER HEALTH DISTRICT



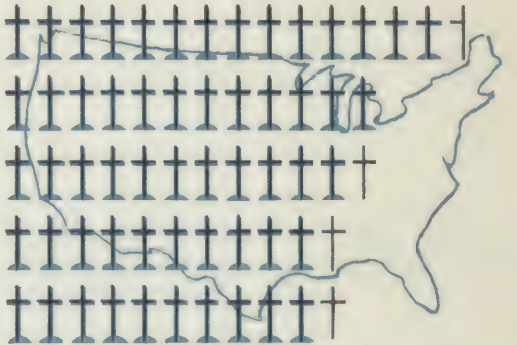
NEW YORK STATE Exclusive of New York City



NEW YORK CITY



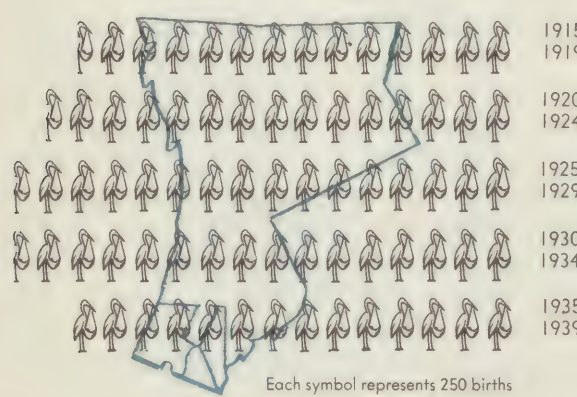
UNITED STATES Registration Area



Each symbol represents 1 per 1,000 population
In the four charts above, blue crosses represent deaths in Westchester Health District for purposes of comparison with deaths in the other three areas.

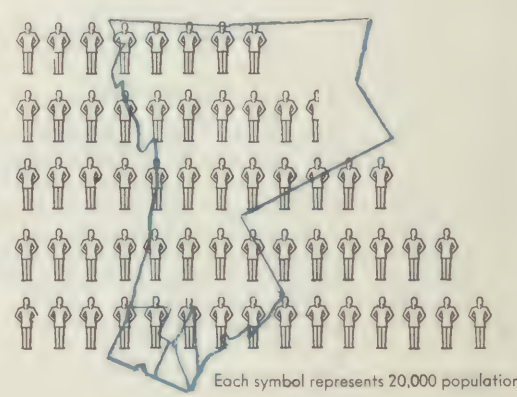
WESTCHESTER HEALTH DISTRICT

AVERAGE NUMBER OF BIRTHS



Each symbol represents 250 births

POPULATION



Each symbol represents 20,000 population

Towner Act supplied large sums to build up child hygiene, through clinics and health lessons. Out of such projects, started with federal and state help, Westchester drew experience and inspiration for important parts of its present health program.

But with all this federal and state aid, the war against the full-time attack of disease germs in Westchester was fought with guerilla tactics. The local health officer had neither time nor money to press an "all-out" campaign.

Tactics deemed sufficient fifty years before—when, for example, all the best doctor could do against the "choking death" of diphtheria was to quarantine the patient and family and open the throat to prevent suffocation—had become anachronistic.

Diphtheria illustrates the changed situation well. Discovery of the germ in 1883 had brought costly new techniques. The health officer now needed time and knowledge to identify each infection by laboratory examination, and also to take laboratory specimens from everyone in the household.

He did not have that time. As a result, the inevitable lag between discovery and its general application had lengthened out intolerably. Diphtheria antitoxin, the serum which could be used both to treat patients and to protect those exposed to infection, had come into general use between 1895 and 1900. Since then, the conscientious health officer always had the serum on hand. He was obliged to see that the remedy, which some physicians still did not know how to administer, was used properly.

In 1913 the Schick test, now known to most mothers, had been devised to tell whether a person was safe from diphtheria, and in the same year a product was developed to make babies immune. Those were powerful weapons, indeed. But again the part-time local health officer lacked time and money, and sometimes knowledge, to use them all along the disease front.

Devices just as splendid as those used against diphtheria were forged for many another drive as the science of medicine advanced. There have

been more developments in the art of healing in the fifty years since Pasteur "discovered" germs than there have been in the art of war since Caesar's time. But such development called for more money, specially trained men. No part-time health officer could begin to keep up with all of them.

One village or township taxed itself to hire nurses to hold clinics; another pinched its pennies. One village used most of the new devices in the war on the dealers of death; another was content to slumber along in the paregoric past.

Gradually it became evident that the fight against death and disease had become too costly and too complex for either the private doctor or the small community to wage without help. And so, in 1921, the state legislature enacted a law permitting county boards of supervisors to establish health districts.

This subject was widely discussed by public-spirited citizens of Westchester as soon as the enabling act was passed. The Westchester County Tuberculosis and Public Health Association began early to work for a health district. Private citizens and organized groups were enlisted in the move.

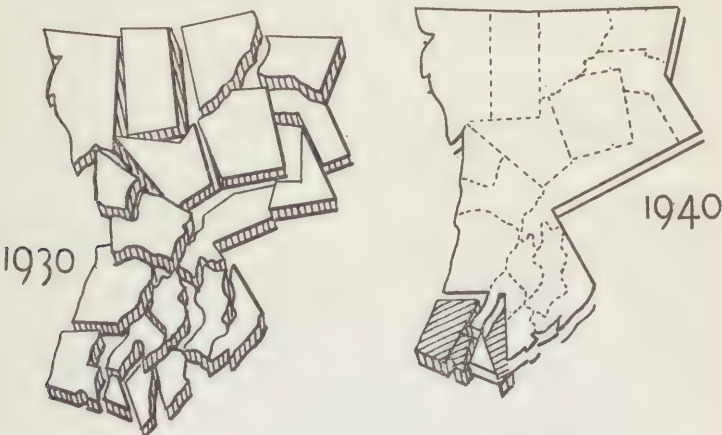
Then, in 1929, the Committee on Tuberculosis and Public Health of the State Charities Aid Association studied the problem, and a plan was submitted to the County Board of Supervisors, which established a county health district starting January 1, 1930.

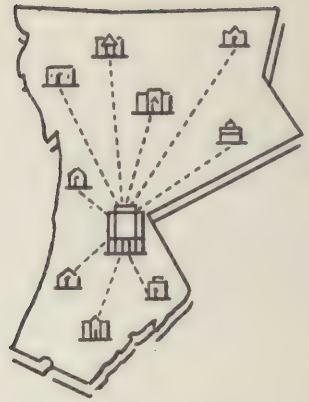
Of the county's forty-three separate health boards, seventeen in townships and five in villages of less than 3,000 population automatically ceased to exist. The city of White Plains abolished its health department in 1931 to join the county district. During the first three years of the decade, ten villages of more than 3,000 population also wiped out their health boards.

The county then had only ten health boards, and so it remained for five years. Since the beginning of 1938, however, more villages have eliminated their local boards, until in early 1941 only two were doubly

served. Peekskill, which voted in 1940 to become a city, decided to remain a part of the health district. Still outside the district are the cities of Mount Vernon, New Rochelle, and Yonkers.

Thus have most of the scattered armies been marshaled into one powerful force. Today health protection is as integral a part of Westchester's government as any of its other forward-looking services to the people.





GOOD NEIGHBORS

JUST as local health departments gain ground by merging into the county health district, so the county districts throughout the state advance in the war on disease by correlated effort, working together as good neighbors. The State Public Health Council and the State Commissioner of Health and his staff make this possible by coordinating and supervising the many health activities in the state.

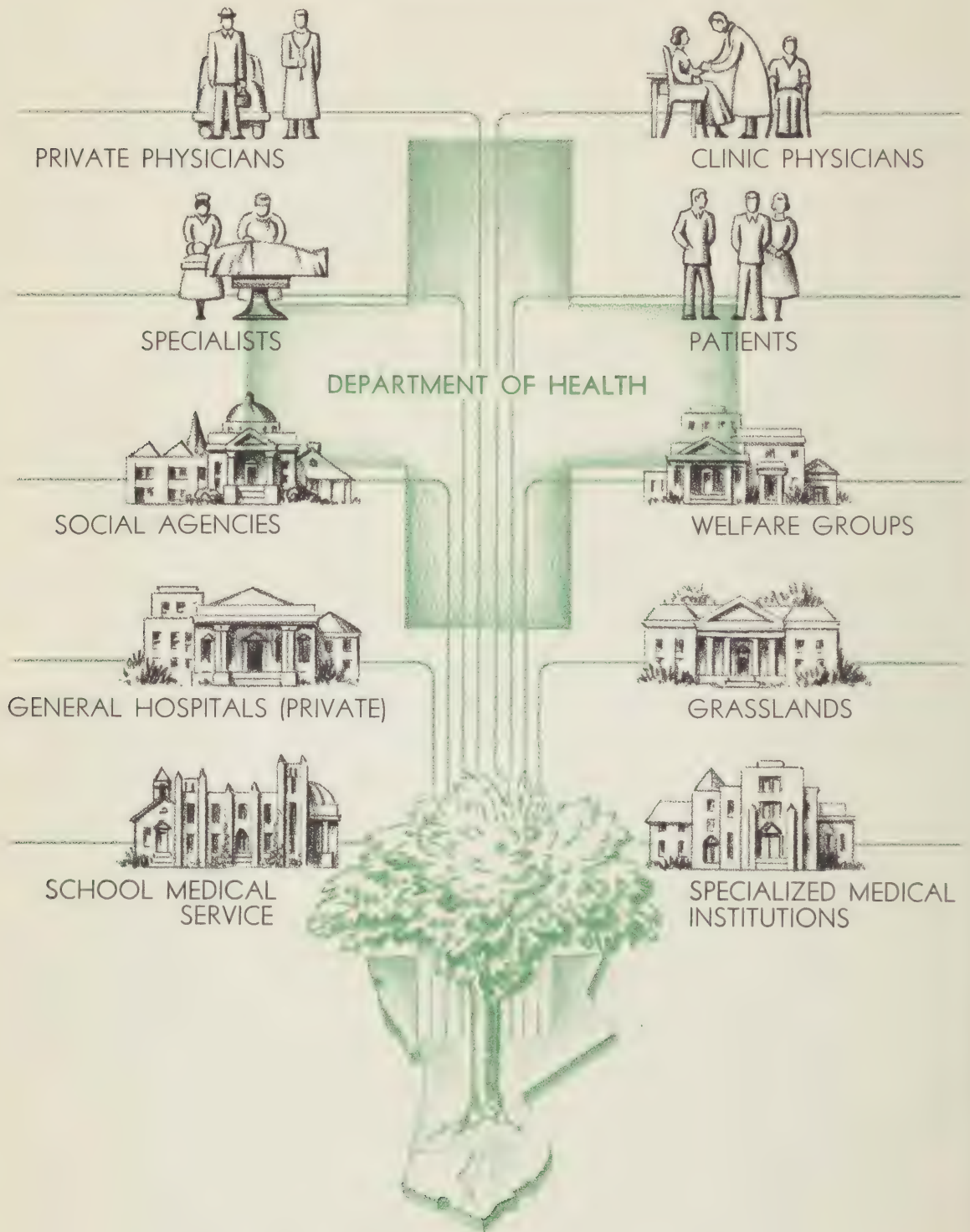
They draft the grand strategy, and shape regulations to supplement the sanitary and other health statutes. They establish qualifications for employees in local health departments, and standards for the departments' work; by inspection, they see that they are put into effect.

In general, this was as true before 1930 as it is today. But the state's supervision is closer in the new county health districts, since the state pays half their cost. No health department is entirely self-sustaining; but the county districts receive the largest share of state aid and, therefore, more attention and help.

It was inevitable that the good neighbors should cooperate in anything so vital as health work. The county health district, focal point for community health work, has made that cooperation easy—a magnet that



COMMUNITY COOPERATION FOR HEALTH



draws into a tight circle the efforts of groups and individuals toward healthier living.

This cooperative endeavor starts in Westchester with the district's 523 private doctors. "Every physician a health officer," health workers say. The private doctor is obviously best informed about his patients. The law therefore makes him co-responsible with the health department, in many cases, for the public's protection.

He must report communicable diseases, including tuberculosis and syphilis as well as the acute ailments covered by that term; he must give the Wassermann test for syphilis to expectant mothers, and report his findings with other details of birth; he must report deaths and their causes.

Besides, Westchester's health department looks to the private doctor and to the County Medical Society for advice and assistance. The Society has committees on cancer, tuberculosis, maternal welfare, public relations, social medical policies, and public health.

When the health department plans an important new drive, such as X-raying residents of an area where tuberculosis is prevalent, it works with one of the Society's committees to enlist the private doctors. Of course, the health department and the Medical Society do not always agree. But out of their occasional disagreements often come more practical procedures.

Cooperation between the department and private doctors is far from one-sided. The department employs thirteen physicians part-time in its clinics; all are paid except a few who give their services in return for clinical experience. The department also employs specialists on a fee basis as need arises, and adds other doctors to its staff temporarily during emergencies.

The hospitals fit into the good neighbor picture just as effectively. Nine of the ten general hospitals in the health district are under voluntary auspices, only Grasslands being public. The ten hospitals provide 1,472 beds for general purposes. Normally these are sufficient, since many

Westchester patients are cared for in New York City hospitals. The hospitals are so distributed as to serve all communities.

Grasslands Hospital—a county institution under the direction of the County Commissioner of Public Welfare—has 795 beds, of which 401 are for general use, including contagious cases. Children suffering from tuberculosis, crippling conditions, and other drawn-out illnesses have their own building, Sunshine Cottage. Tuberculous adults and mental cases are also housed separately.

Besides the ten general hospitals, the district has more than fifty specialized institutions. Some are for cancer, heart disease, tuberculosis, mental diseases, and crippling conditions. A number are convalescent homes. Many are operated by New York City organizations, but some of these admit persons living in Westchester.

Most of the general hospitals conduct clinics for outpatients. Each week 150 clinics are held in hospitals in the health district, and twenty-five others are conducted by voluntary agencies and the few remaining village health departments. A small fee is charged at some of these, but most are free, and persons unable to pay can obtain treatment at clinics in all the more thickly populated sections of the county without traveling far. The treatment provided runs the whole range of medicine and surgery from allergy to varicose veins.

Medical service in all public schools in the state, outside of very large cities, is provided under the direction of the State Department of Education. The county health department has little authority in the schools except in reportable diseases and sanitation. The department and the school health service cooperate, however, and have worked out satisfactory methods of reporting communicable diseases and of handling other matters in which they are concerned jointly.

Community of effort toward health is likewise exhibited by many local government agencies. By state law, county and local welfare officials provide medical care for the people of low income. They pay the physicians, with some state and federal help. In the county government the Children's Court, Department of Public Works, Park Commission, Recrea-

tion Commission, and Water Commission, all promote individual and community well-being.

The County Council of Social Agencies—with a central index to clear the names of those seeking help—correlates and interprets the work of these agencies and the voluntary social and health organizations. Twenty or more of these organizations are set up on a county-wide basis, and there are at least fifty other local or district agencies which concern themselves with health problems.

Manifestly, the efficiency of public health service depends upon organization and the cooperation of organizations—public and private. The Westchester County Department of Health seeks to foster and give such cooperation in all efforts directed toward community health.

WHO AND WHAT

THE BOARD OF HEALTH

comprises nine members, four of them doctors. The members are appointed by the County Board of Supervisors. All serve for six-year terms except one who represents the Board of Supervisors at their pleasure.

enacts the county sanitary code, which permits the department to meet situations not covered by the state laws and regulations.

advises the Board of Supervisors on changes in the Public Health Law and the County Commissioner of Health on policy. The board is no "window-dressing," but a working group. During the ten years ending in 1939, an average of two-thirds of the members attended each of the seventy-three meetings held.

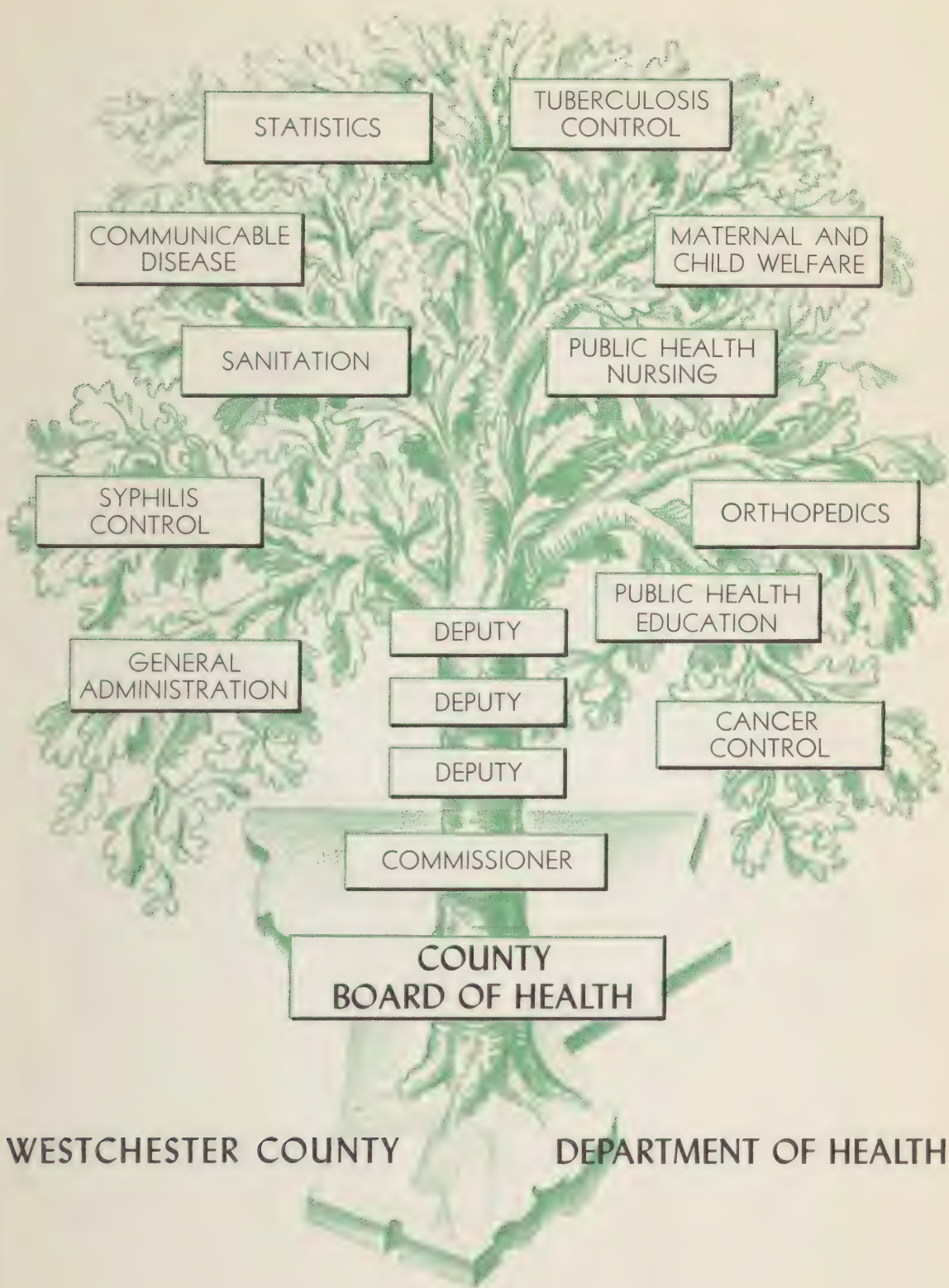
THE COMMISSIONER

is appointed by the County Executive, with the approval of the Board of Health, which reviews his work. He appoints his staff under state civil service, and directs their activities.

THE STAFF

comprises ninety full-time workers, all of whom are required to pass civil service examinations except the deputy commissioners and janitor. There are eight doctors, thirty-four nurses and three X-ray technicians; four sanitary engineers, four milk sanitarians, and six inspectors; a statistician, a health teacher, and a veterinarian. In addition, about thirteen part-time physicians are normally on the staff conducting clinics.

functions through eight divisions—administration, communicable disease, health education, maternal and child hygiene, public health nursing, sanitation, tuberculosis, and statistics—and within those divisions are special units for syphilis control, orthopedics, and cancer control. All work together closely, for nearly everything the department does brings several of them into play.



ACUTE COMMUNICABLE DISEASES



DEATHS

1920 - 1924

1935 - 1939

PNEUMONIA



OTHER COMMON
ACUTE
COMMUNICABLE
DISEASES

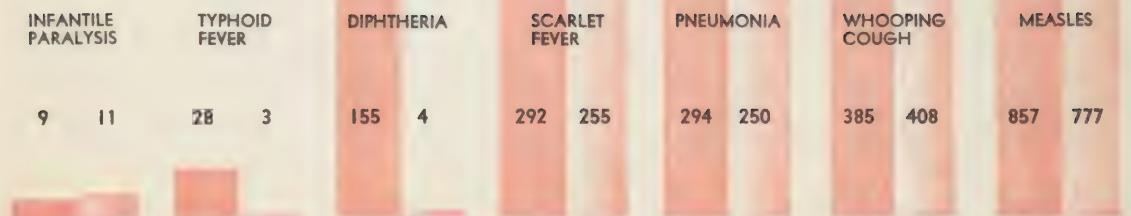


Each symbol represents 10 deaths per 100,000 population

CASES

1920 1935
1924 1939

Rates are per
100,000 population





THE NERVE CENTER

LIKE a sensitive nerve system, public health stretches out to reach all sections of the population. The center of this system, tying together the work of the health department's seven other divisions with that of private physicians and other agencies, is the health district's statistical office.

The impulses received over this nerve system, and classified and interpreted in its center, give the plotters of the fight against disease a map. Here they learn what diseases are striking in what areas, and where their skills are needed most. And, because the nerve center is a great collection of health histories of individuals, it serves also in providing quickly a medical background for a doctor tackling a new case.

There is an index card in this central office for one out of every three residents of the district, showing where to find the records which relate to their health. Not only does this health department index receive a record of every baby born in the district, but also of every baby born to district parents elsewhere in the state. Every death of a district resident, even if he dies somewhere else in the state, is recorded **here**.

Vital to community health in the effort to check the spread of disease, the department's records must be as complete and accurate as possible.

When a doctor discovers a case of communicable disease, including tuberculosis and syphilis, he tells the health index who has the disease, where the patient lives and, if the physician knows, where the disease was "caught." Every time a department nurse visits a home, she informs this index what and whom she found there and what she did. Every time anyone attends a department clinic, a record of it, including what was discovered, goes into the health index.

As soon as a person is registered here, his name is sent to the County Council of Social Agencies which lists the social and welfare organizations that have given him service.

In a special file, there are cards for the health district's 20,000 pre-school children, showing whether they have been immunized against diphtheria, whether they have been vaccinated, and what communicable diseases they have had.

There is a special tuberculosis file. It contains cards for everyone known to have the disease and for everyone who has lived in the same household with a sufferer; in the cases of these "contacts," it tells whether they have been examined for tuberculosis. Similarly there is a special syphilis file, a register of the crippled, and since 1940 a file of all persons having cancer.

Laboratory reports are filed giving the results of blood and sputum tests, and so are X-ray films. All told, the department receives 95,000 new records every year, each telling something about the health (or birth or death) of some resident of the district.

The sanitation division keeps its own records of the 25,000 yearly investigations or inspections of dairies, water, food, and sewage disposal. Reports of laboratory tests of milk taken off delivery trucks are included, and so are the results of examinations of cows.

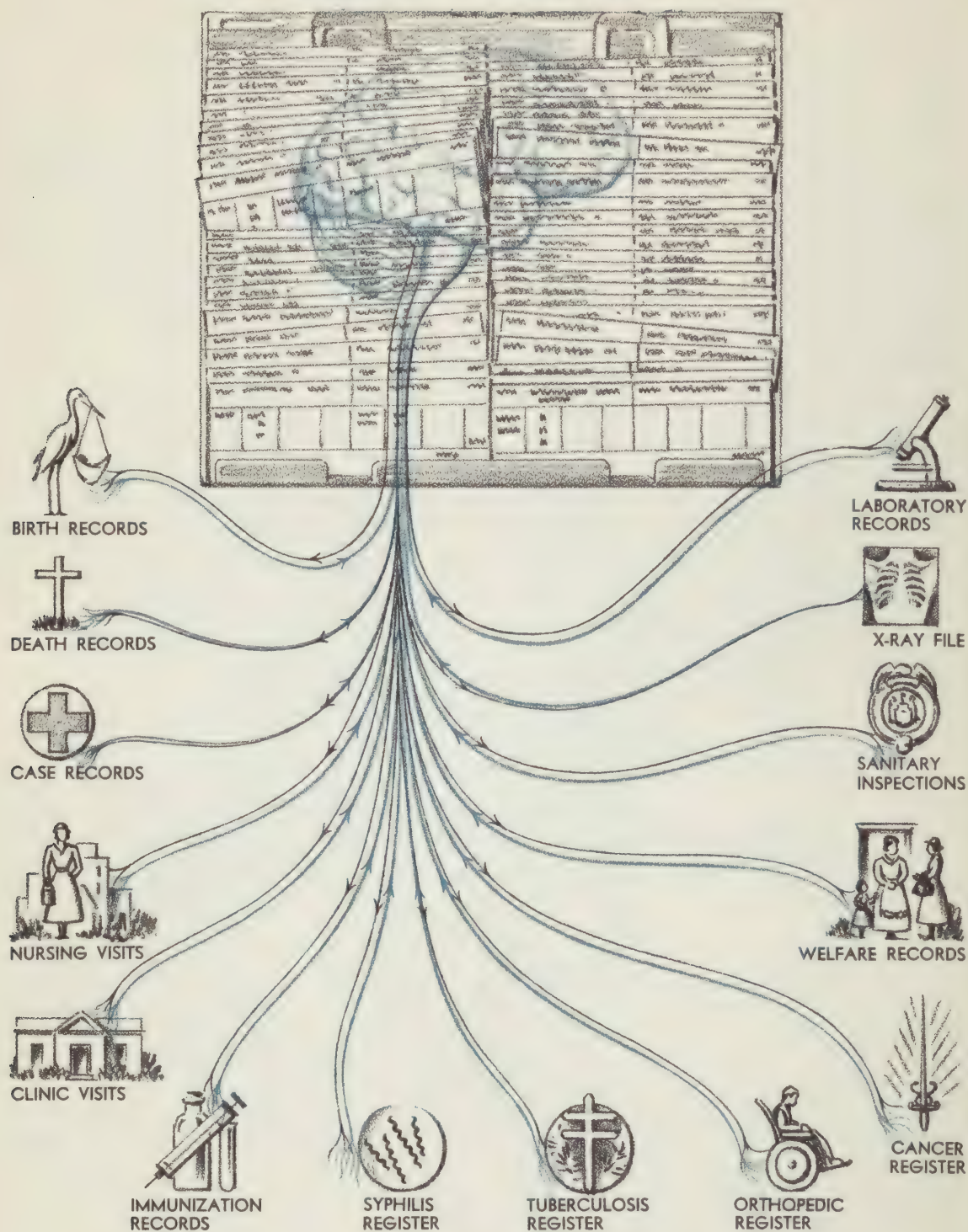
Some records were kept, of course, before the county health district was organized. But they weren't preserved as carefully as now; and some were figured one way in one place and a totally different way in another, making comparisons difficult. Moreover, there was no central office.



THE HEALTH INDEX
IS THE

NERVE CENTER

OF ALL DEPARTMENTAL
ACTIVITIES



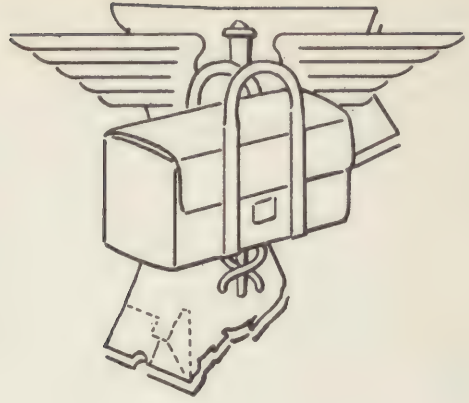
Many are the uses of these thousands of cards and columns of figures. If typhoid fever or another water- or food-borne disease appears, the files of the sanitation division may yield a clew to track it to its source. Civic groups find here the material for talks on community welfare, and charitable organizations the figures on which to base their estimates of future needs.

Of course, though the health department supplies statistical information to persons and agencies interested in health, all individual records are kept strictly confidential. No information about a specific person is ever given to anyone except his private physician.

Charts drawn from all these figures are yardsticks for measuring the ground gained by the department and by all health agencies in the district in the continuous war against disease. They furnish material for medical studies which help raise the standards of health in other counties, perhaps at opposite corners of the nation.

Most important of all, however, the record system reconstructs for the health workers in the district—private physicians and the department's staff—the medical past of patients and usually of their relatives. Thus the index plays a vital role in preventive medicine.

To and fro the "impulses" pass continuously along the nerve system of the health service—bearing messages which help to guard the lives of Westchester's children and adults.



THE NURSE

THE public health nurse on the department of health staff is a hard-working, sympathetic woman who must know not only how to help people get well, but how to teach them to keep well. And that second job is most important in the health district's scheme of things.

She spends more than half of her time making the rounds of homes in her charge—all manner of homes. She may start her day by climbing the rickety stairway of a frame tenement to a third-floor apartment on a side street in a city. The wallpaper is stained from leaks around the windows, and the plastered ceiling is badly cracked.

The nurse asks the tired, middle-aged mother how Bill is getting along. He is an eighteen-year-old son, a tuberculosis patient who was discharged from Grasslands two months before. The nurse finds the family budget for food does not allow for the needed milk and fresh eggs, vegetables and fruits recommended. The family needs whatever money Bill can earn, so he is already overtaxing his strength on a part-time job, though he works only sixty-six hours a month.

Bill's father died of tuberculosis three years ago, and his mother is the main support for Bill and his two younger sisters, who are still in

school. She makes four dollars a day as a cleaning woman, and wants to do more so that Bill would not have to work. But he won't have it that way.

The nurse makes a note to discuss the family budget with the welfare office. A letter from the health department will help to obtain approval for the needed increase in the food budget. She also arranges for the mother and two girls to attend a county chest clinic to make sure that they continue free of tuberculosis.

Next she drives into the country, and stops at a small house to visit a middle-aged gardener employed on a near-by estate. He has been referred to the health department by a private doctor as a victim of syphilis, but it is difficult to get him to go to clinics regularly for treatment. The nurse persuades him to attend an evening clinic.

She drives on to a residential section, and stops before a large Tudor home. A butler ushers her in to see the mother of a year-old baby. The nurse has a card for this baby, as she has for all babies in her locality, and she wants to make sure the child is immunized against diphtheria. The mother is amazed to learn that the public health officials follow up her case, even though she always has had private medical care. She questions the nurse carefully, recalls that her doctor has advised inoculation, and promises to call the nurse as soon as her baby has been immunized.

So the nurse's day continues—or as much of it as she does not have to spend in the office writing case histories, or assisting in clinics, or lecturing, or following up patients who failed to appear at clinics. And that is likely to be her typical day, whether she is a department of health nurse or a member of a local staff supervised by the department.

Her work was not always so general. When the local auxiliary of the American Red Cross founded the Northern Westchester District Nursing Association during the smallpox epidemic that followed the Spanish-American War, the major thought was to care for the sick.

It was soon realized, however, that the visiting nurse had a remarkable opportunity to promote health, and as preventive medicine developed, a demand arose for teachers who could spread the scientific knowledge

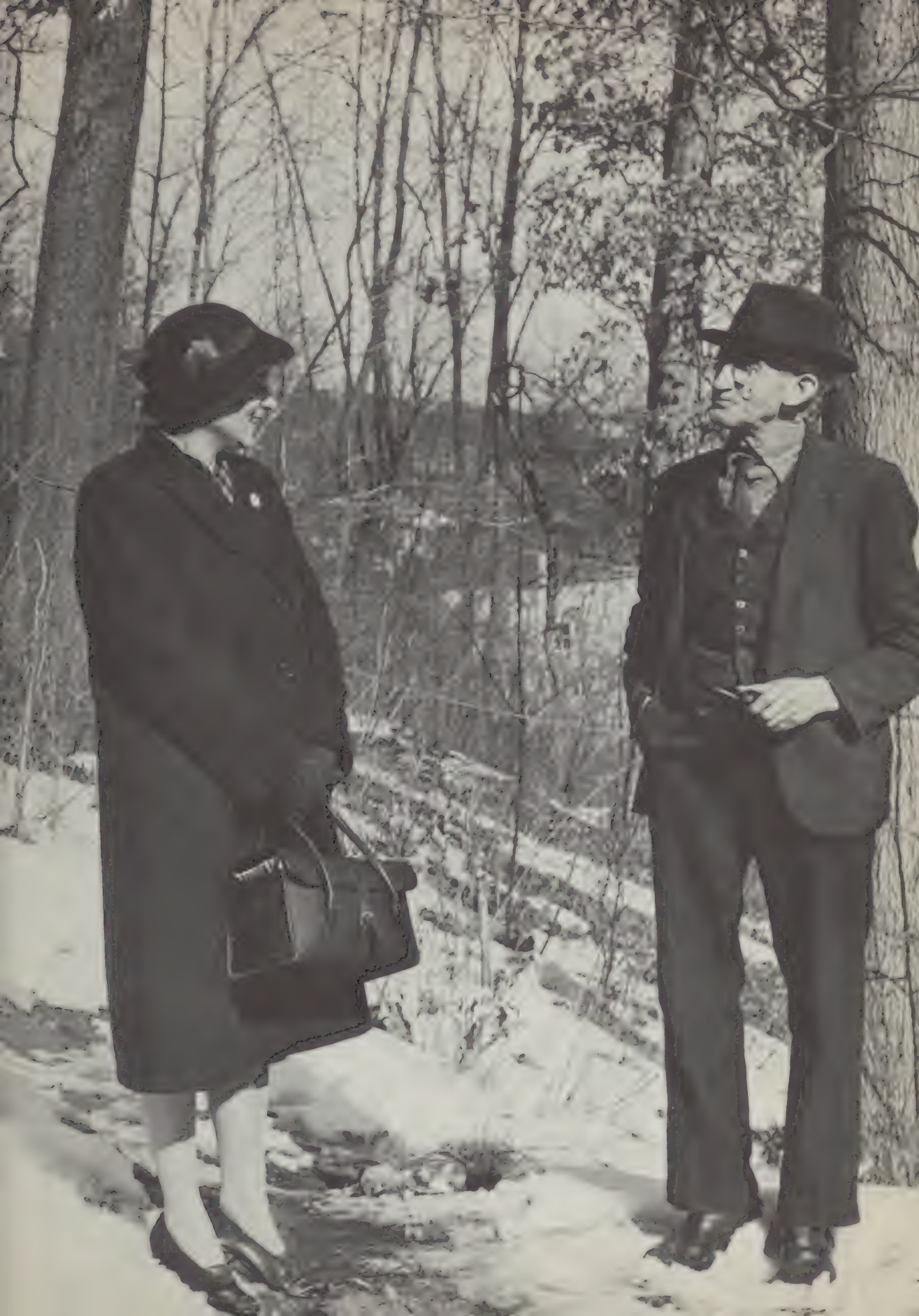
being learned in the laboratory. The pendulum swung over so far that today in many places the public health nurse is not supposed to nurse sick people except to demonstrate care.

For a time, many public health nurses were specialists, some in tuberculosis, some in crippling conditions, and some in the care of children. The authorities were slow to enter the nursing field, except in schools, and a variety of private nursing associations were formed, each with a different program. Larchmont employed a public health nurse in 1912. But most communities waited until after the World War, which hastened the growth of services in a number of villages and towns—much as the Crimean War had led to the founding of the Red Cross and the Spanish-American War to the start of visiting nursing in Westchester.

When the county health department was established, there were 120 public health nurses in the district, of whom 75 were school nurses. The remaining 45 were employed by twenty organizations. Only a quarter of the 141 public health nurses now employed in the district are on the department's staff, and sixteen organizations remain, but the county department has succeeded to a great extent in coordinating the work of all. In addition, at the end of 1940, there were still seven nurses paid by towns and villages, but they were supervised by the department.

For the first three years of the department, even some of its own nurses were specialists, and several often called at the same house. However, the advantages of a generalized service were gradually realized, as well as the need for home bedside nursing care. A combination of instruction and bedside care grew up, which in turn made it easier to integrate the services of department nurses with those of nurses employed by other agencies.

There is a pooling of services wherever possible, and informal agreements are made with various localities to avoid having the same family cared for by two, three, or four nurses at once, each with a different function. The department still has one specialized nurse to attend the crippled; otherwise all its nurses give generalized care. In five rural areas, full bedside care is given to needy cases of all kinds.



A DAY WITH THE PUBLIC HEALTH NURSE

NURSING STAFF



VISITS AND CONFERENCES



Since the 1920's, boards of nursing organizations have met together to discuss common problems. A new nursing section of the County Council of Social Agencies was formed in 1940. It covers all kinds of nursing, private and public, home and hospital, and its formation should be of great value in furthering cooperation between official and voluntary agencies.

Up-to-date visiting nurse associations now require that their nurses have the postgraduate training and experience which are required of public health nurses by law.

The thirty-four nurses on the department's staff in 1940 made 40,107 visits, mostly to homes but some to welfare offices and other agencies. Nearly a sixth of their visits were to enforce quarantine regulations, take specimens, or otherwise care for the sick, and a twentieth were to help expectant mothers and to teach care of the newborn. A third were primarily to teach adequate medical supervision and the need for examinations, to discuss immunization, interpret physicians' findings and recommendations, to help obtain better social and personality adjustments, and to teach hygiene.

Whatever her reason for going to a home, she always makes suggestions for improving the health of those in the household. The public health nurse is the key person in any modern health department. She is the emissary for all other divisions of the department, the one who is in the most frequent and intimate contact with the public, for she is a family adviser and guide.



THE QUARANTINE SIGN

QUARANTINE was born of fear, and fear is required to enforce it. Absolute quarantine, meaning restriction as complete as if the patient and his family were marooned on an island, probably would wipe out a number of diseases if it could be achieved. Theoretically it might even stop the spread of the common cold.

But except when an epidemic of some dramatic killer arouses fear, it is impossible to enforce strict rules with a satisfactory degree of perfection, outside of an army camp or institution.

In one form or another, quarantine is as old as history. In many instances, even slipshod quarantine helps to some extent; in others, we have learned that it is of little use.

Against such ills as typhoid fever, the strictest quarantine is ineffective by itself. It helps—but only if water and milk supplies are made safe. By combining the two methods of attack, and by extending to chronic carriers of the disease what almost might be called a permanent form of modified quarantine, this disease has been virtually suppressed.

Twenty typhoid carriers—who appear healthy themselves, but are infected with typhoid germs—live in the health district.

Since typhoid fever is likely to spread through either food or drink, the carriers are not permitted to work as nurses, cooks, waiters, or at any other job in which they would handle food for other people. They are required to dispose of their discharges in such a way that private and public water supplies will not be contaminated, and must notify the health department if they move.

They come from all walks of life, rich as well as poor. When requirements keep them from working, the state pays them a monthly pension. Removal of the gall bladder and a series of negative laboratory tests are required before a carrier is released from supervision.

A public health nurse visits each typhoid carrier every three months. She makes sure that no rule is being violated, and discusses with the carrier and his family the necessary precautions. No previously discovered carrier in the district is known to have infected anyone else since 1930.

Restricting the activities of typhoid carriers in this way is possible because they are few, and generally they have had the disease themselves. In some diseases, however, large numbers of people are infected without showing symptoms. Here quarantine breaks down, since it is impracticable to identify and restrict all such carriers.

The public has an abiding faith in quarantine, though, and for this reason health departments continue to go through a good many restrictive motions to satisfy the public rather than for any good those motions do. The law is beginning to recognize this, and the strictest measures are now required only for cholera and bubonic plague (both practically unheard of in New York State) and smallpox and typhus fever.

Mumps, a highly contagious disease which, however, is not dangerous to children, was removed a few years ago from the list of ills which by law doctors must report to health departments. Chickenpox remains on the list only because the rash looks something like smallpox, and smallpox may therefore be wrongly diagnosed as chickenpox.

The degree of quarantine, or isolation, and its duration naturally varies for different diseases. In measles, other members of the household are kept away from the patient, but that is all. This is done to keep other

germs from reaching the patient and in the hope of postponing the age at which young children in the house will "catch" the disease. There is little or no pretense that it will keep measles from spreading.

In diphtheria and scarlet fever, members of the household are not only kept away from the patient, but the house is quarantined. Unless they handle food in restaurants or stores, or come in contact with children in their work, the grown-ups are permitted to enter and leave the house.

Children are as apt as ever to "catch" measles, scarlet fever, and whooping cough, but typhoid fever and diphtheria have become rare and smallpox rarer. These victories, however, have been achieved by means other than quarantine—that over typhoid, by purification of the milk and water supply; that over diphtheria, by immunization of children under five years old; and that over smallpox, by vaccination.

Deaths from most of the acute communicable diseases had declined before 1930, and they have continued to decline sharply. The combined death rate from all these diseases, not counting pneumonia, is now only a sixteenth as high as the death rate from tuberculosis.

There are a number of reasons for this. Among them are better reporting, earlier diagnosis, saner restrictive measures in some instances, and better medical and nursing care. There has also been an unexplainable decrease in the killing power of certain diseases.

Health departments obviously must know of the existence of a disease before they can do much about controlling it. Not only physicians, but any persons knowing about a communicable disease case, have long been required by law to report it. The reduction in the number of health districts in the county has made this easier and insured a surer check on reports.

Germes are tricky, and different people react to them differently. It is sometimes extremely hard to tell one infection from another, and doctors may disagree. The county health department helps doctors diagnose more than 200 cases of communicable disease yearly through its own staff and outside consultants. Anyone suspected of having infantile



Dept. of Health

These Provisions are now in effect
NOTICE! QUARANTINE
COMMUNICABLE DISEASE

All persons are forbidden to remove this card or to enter or leave these premises without permission of the Department of Health. By Order of Westchester County Dept. of Health

GEORGE H. RAMSEY

Quarantine Station

1917

paralysis is seen by a consultant, and the same is true of certain rare diseases.

A public health nurse visits communicable disease cases and, acting as "the law," sees to it that the appropriate isolation or quarantine measures are put into effect. This is in sharp contrast to the practice, still common in some sections, of leaving enforcement to elderly servants of the party in power, whose qualifications consist of the ability to carry and tack up quarantine signs. It has been a long time since this was true in Westchester, but it is doubtful if, before 1930, the part-time village health officer or his representative had the time to visit every reported case of measles or scarlet fever.

The thirty-four nurses of the county health department make an average of 5,400 visits a year to control communicable diseases. They would make more, but half of all diphtheria and a sixth of the scarlet fever cases are hospitalized. On the average, where the patients remain at home, the nurses visit the home of each sufferer from diphtheria eight times.

When a case of scarlet fever is reported, a slip bearing the patient's name and address is handed to a department nurse, and no matter what else is on her schedule, she calls at the home within a few hours. She teaches care of the patient and protection of the household, and, if necessary, returns several times. If all goes well, after twenty-one days she releases the household from quarantine. She reports the release to the central office, and the case goes back into the big index, where it may help improve control methods.

More and more, other methods are taking the place of restrictive measures. Take pneumonia. In recent years science has found that the best method of attack is early and adequate treatment.

Serum for treating pneumonia was developed more than twenty years ago, but the original product had to be given in large doses and was quite expensive. A new way to concentrate it was perfected in the 1930's. About the same time, it was discovered that there were more than thirty kinds, or types, of pneumonia germs.

Three kinds and a heterogeneous group had been known previously,

but they could be identified only by laborious inoculation of mice. A simple test was now devised by means of which one kind could be distinguished from another under a microscope in half an hour or less.

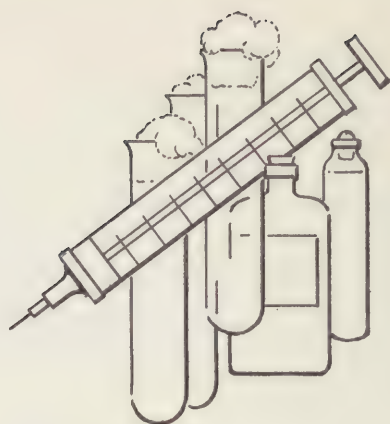
These laboratory advances—together with studies showing that the death rate for pneumonia was influenced by the quality and quantity of general medical and nursing care—laid the foundation for special control programs. The state medical society and the state department of health began such a program in 1935, in cooperation with the state association of public health laboratories and with help from other public and private agencies.

Serum for many of the thirty kinds of pneumonia germs was made available to all doctors, and facilities for identifying the kinds were established in laboratories throughout the state. Lectures were delivered before county medical societies, and doctors shown how to administer the serum. Nurses were coached, by conferences and demonstrations, on the care of pneumonia patients. A program of popular education was launched. The county health department, since 1935, has distributed 2,000 packages of pneumonia serum worth \$50,000.

Only four years after the intensive state-wide campaign began, a new drug for the treatment of pneumonia, sulfapyridine, came into use, and a year later a second drug, sulfathiazole. A patient can swallow these, instead of having to take them through a needle stuck into a vein. More important, it does not matter what kind of pneumonia he has; both drugs work against all kinds. However, there are many cases which respond best to combinations of serum and one of the new drugs, so it is still important to find out what type of pneumonia the patient has.

The state began distributing sulfapyridine and sulfathiazole in 1941, and these drugs are now on hand in the county department of health's central distributing station, given free in the treatment of pneumonia.

In modern times, not only new drugs, but also different methods of treatment and control have outmoded the old-fashioned kind of quarantine—which may eventually become a gesture to custom and the remedy of yesterday.



IMMUNITY THROUGH THE NEEDLE

FROM cradle to grave, harmful germs continually invade everyone's body. Yet they often fail to cause disease. The body has its own defense—the power to live, through eliminating the invaders, or checking the poisons they spread. This power of the human body to resist germs is known as immunity.

But many persons do not develop enough natural immunity against the spreaders of disease—particularly to repel the occasional surprise attacks of those germs which are death dealing.

In certain diseases, scientists have found ways to stimulate the body to develop and increase its own powers of resistance. This is called active immunization. For example, take diphtheria. Minute quantities of the poison manufactured by diphtheria germs (made harmless in the laboratory) stimulate immunity when injected. Smallpox immunity is conferred by inoculation with cowpox, a closely related disease not serious to man.

It is the department of health's important task to furnish means of protection, and to encourage you to become immune to those diseases against which reliable weapons have been found.

Immunization has worked wonders. Smallpox has virtually disappeared wherever vaccination has been widely and consistently practiced. It was almost gone in Westchester before 1930, although vaccination is not compulsory in New York State communities of less than 50,000 population unless a person has been exposed to the disease. Since without vaccination there is always danger of an outbreak, vaccination is repeatedly urged by the county health department, by doctors individually, and by the County Medical Society.

With the mothers' consent, the department vaccinates children brought to well-baby and other clinics. In addition, it holds three to fifteen special clinics every year for smallpox vaccination.

The department of health does not know how many are vaccinated; physicians are not compelled to report vaccinations in private practice. But at least 1,500 to 2,000 vaccinations a year are recorded, and the number is considerably greater, as a survey of the health department showed in 1936. This survey of the district, exclusive of White Plains, revealed that 68 per cent of all school children under the seventh grade had been vaccinated against smallpox at some time or another, even though vaccination is not compulsory.

In connection with diphtheria, outstanding pioneer work was done in Westchester institutions toward development of an immunizing product. This product had a limited use in the county almost from the time it was developed in 1913 and its use increased rapidly in succeeding years.

In 1926 a state-wide campaign against diphtheria was begun by the state department of health and the Committee on Tuberculosis and Public Health of the State Charities Aid Association, with its affiliated local organizations.

Unfortunately, when health officers first began to immunize children, they concentrated on school children who could be reached in groups without much trouble. But deaths from diphtheria have always been highest among young children, and in time it was realized that the best

standard was the number of immunizations among those under five years old.

The state campaign showed that no approach was so persuasive as the personal interview. As a result, the Westchester department of health gives each nurse a list of babies born in her territory. As soon as a baby is six months old, she telephones or visits the home to urge the mother to take the child to the family doctor for inoculation. If the parents are unable to pay for the injection, the nurse urges the mother to take the baby to a department clinic.

The nurse follows up until she is sure that the baby has been armed against the disease. All told, the department's nurses make 2,500 visits a year to urge diphtheria immunization. As a result, in every community in the district at least 50 per cent of children under five have been immunized. The proportion for the entire district has been above 70 per cent for five years.

A single inoculation arms seven out of ten children against the disease. The product now administered is called alum toxoid. The Schick test is used to determine whether those inoculated are immune. The department uses the test at its clinics, recommending a second inoculation if the first does not take.

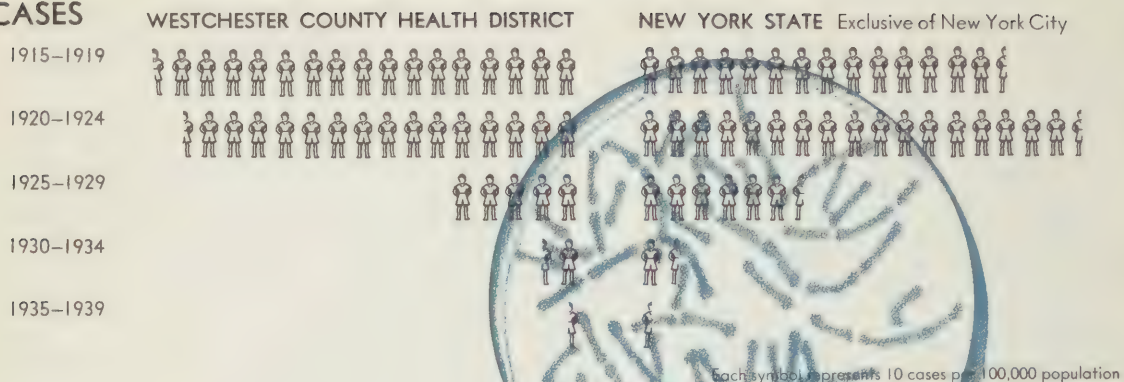
Diphtheria, which killed twenty-four children in the district in 1915, was still killing seven or eight children every year when the county health department was organized. In 1938 only one in the whole district died, and since then none. Carriers, however, are still found wherever groups of children are examined, and, although only a small proportion of infected persons ever develop symptoms, exposure at some time during life can scarcely be avoided.

Against certain diseases, a temporary shield called passive immunization is available. Here the individual is given brief immunity by treatment with serum or antitoxin, containing ready-made protective substances. Such antitoxins are frequently used to protect persons exposed to germs as well as to treat disease.

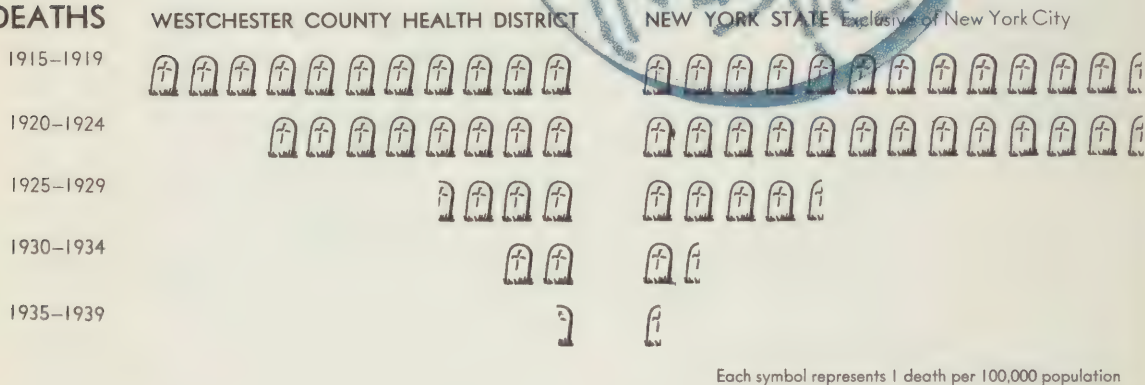


DIPHTHERIA

CASES



DEATHS



IMMUNIZATION OF PRE-SCHOOL CHILDREN



DISTRIBUTION OF DIPHTHERIA TOXOID



The county health department distributes twenty-five such serums and vaccines, some for prevention and some for treatment. Supplied by the state, they are free to doctors treating the rich as well as the poor. For convenience, the department of health has established twelve stations at strategic points where doctors can obtain these products quickly and easily.

The department distributes 10,000 packages of vaccines and serums every year. More than 3,500 are of tetanus antitoxin to prevent lockjaw. When a firecracker explodes in Johnny's hand on the Fourth of July, he is ordinarily inoculated with this antitoxin, if his parents call a doctor. It is used to avoid infection when a wound gets dirty.

In ten years the department also has distributed enough rabies vaccine to treat 190 persons who had been bitten by dogs suspected of being rabid, or by stray dogs that could not be located. There have been no human cases of the disease in the health district despite a six-year epidemic among dogs which began in 1934.

The epidemic among dogs reached its peak in 1936, when there were fifty-five known cases. In that year the department obtained a special appropriation for rabies control. More than 3,000 dogs were seized and 750 were destroyed, but the disease did not disappear until the fall of 1940.

Guarding health against the diseases which can be curbed by immunization is one of the chief duties of health officials, doctors, and parents. Constant vigilance to maintain active immunization at a high level is necessary against enemies which may return to strike again.



SENTINELS OF HEALTH

CLEANLINESS is as important to a county as to a person, if the county is to live healthily. And it isn't sufficient that the county merely keep its face clean; it must "wash behind the ears" by seeing to it that germs do not have hidden places in which to breed.

That means cleanliness in terms of water and milk, swimming beaches and sewage disposal, food and camps. That means, indeed, the whole range of cleanliness that we call environmental sanitation. Here is one of the department of health's greatest fields.

Public health duties in sanitation have evolved remarkably over the decades. Fifty years ago a book such as this would have been devoted largely to discussion of sewer gas, bad odors, and other nuisances. The sewer-gas theory of disease has been exploded long since, but the health department still receives and investigates three or four complaints every day about such things as rubbish disposal, water in cellars, and even the noise of a neighbor's radio. This work is done at the request of the public.

Forty years ago, this book would have stressed control of typhoid fever, which then killed thirty-two persons every year out of every

100,000 of the population. Poor water and milk were common then, and so were huge epidemics of this water- and milk-borne disease.

As far back as twenty years ago, most of Westchester's water was protected and a large part of its milk was crudely pasteurized. Less than a fifth as many people died in 1920 of typhoid fever as in 1900. But, for all this improvement, standards were not so high in the 1920's as they are now and as they will be tomorrow. The campaign for cleanliness never ends.

Just before the county health district was established, Port Chester experienced one water-borne typhoid outbreak, and a second in the summer of 1930. The disease was tracked to private wells inside the village limits, and the wells were filled up. Since then, deaths from typhoid fever have been reduced to an average of one a year in the whole district, and there have been no epidemics of typhoid or of any other serious disease attributed to polluted water.

But the typhoid germ still lurks, waiting for the watch to be relaxed. Recent disastrous epidemics in the United States have shown the need for eternal watchfulness in protecting every community's supplies of water, milk, and other foods.

For this reason, the Westchester health department's sanitary engineers periodically inspect reservoirs, pumping stations, and plants where water is filtered or treated with chlorine gas.

Operators of local plants analyze thousands of samples of water every year, and the department itself makes about 200 inspections of public water supplies. It would make more, but over a third of the water used in the district comes from New York City supplies—and the big neighbor guards its own water standards, and ours.

Nine-tenths of the people in the district are now served by public water supplies. Eighty-eight per cent have water which is chlorinated and 46 per cent have water which is both filtered and chlorinated.

As a result of all this care, the water from your tap is free from germs that kill.

The excellent condition of the public water supplies permits more attention to private wells, for which permission must be obtained from the department. The ground is inspected, and the builder advised on installation. The supply unit must be built and maintained properly before a permit is issued.

Whenever water-borne illness is suspected, wells are checked and samples of water tested in the laboratory. The division of sanitation likewise inspects periodically restaurants, schools, and dairies having private sources of water. To prevent contamination by seepage, they also examine private wells in localities having public water supplies but no sewage disposal systems. In 1940, they made 364 inspections of private wells and took 489 samples for analysis.

An integral part of safeguarding water is sewage disposal. Following organization of the Westchester County Sanitary Sewer Commission in 1926, the system of trunk sewers was extended, until by the end of 1939, more than four-fifths of the county's population was provided with public sewage disposal.

To protect its own water supplies, New York City built the county's first complete sewage treatment plant at Mount Kisco in 1908. Before 1920, five other plants had been built by villages, and by 1930, five more. Municipalities in the Hudson River Valley have been ordered by the State Commissioner of Health to install facilities to treat their own sewage. By early 1940, twenty-nine villages, towns, and cities were served by twelve plants in the county health district and two joint treatment plants in Yonkers.

As a part of its regular duties, the county health department supervises and checks up on public sewage disposal, making an average of a hundred inspections a year. To enforce the county's sanitary code, department engineers made more than 1,100 inspections in 1940 of septic tank and other private facilities. This was more than five times as many as in 1931, and three times as many as in 1935.

Protection of the water supply nowadays also includes supervision of bathing beaches and swimming pools. Little of this was done before the



DAIRY FARMS
(NEW YORK STATE)



DAIRY FARMS
(OTHER STATES)



DAIRY FARMS
(COUNTY)



SHIPPING



PASTEURIZATION



BOTTLING



DISTRIBUTION



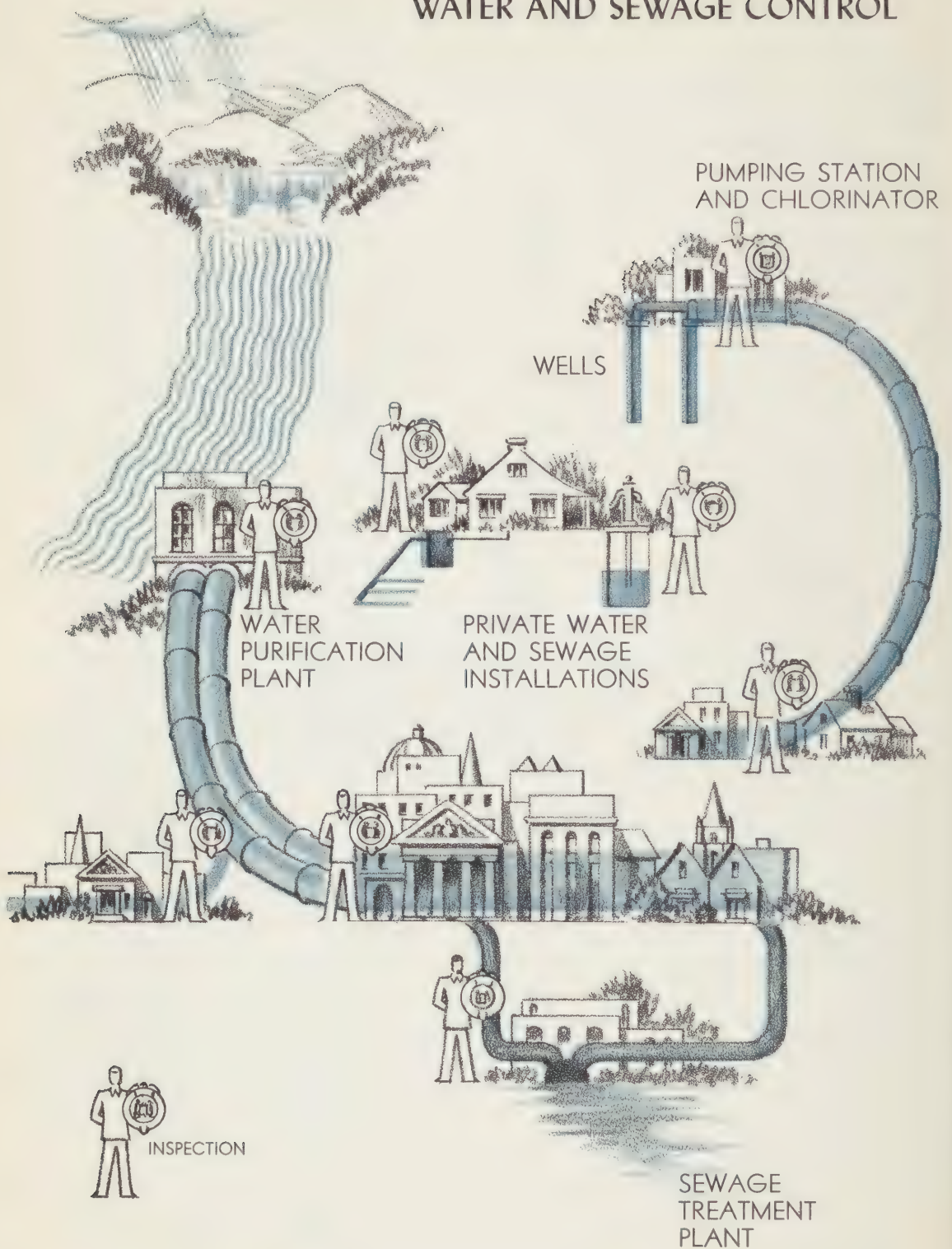
MILK CONTROL

EXTENDS HUNDREDS OF MILES OUTSIDE
THE BORDERS OF WESTCHESTER, FOR
EVERY DAIRY THAT SUPPLIES MILK TO
THE COUNTY IS REGULARLY INSPECTED
BY COUNTY, STATE, OR NEW YORK
CITY HEALTH DEPARTMENTS



INSPECTION

WATER AND SEWAGE CONTROL



health district was organized, even though the county has long been a summer playground for thousands from all parts of the metropolitan area and from more distant points.

Now all communities on the Hudson and on Long Island Sound are compelled to chlorinate their sewage at least during the summer. Moreover, the health departments of New Jersey and New York State attack the problem of pollution jointly, through the Interstate Sanitation Commission.

Since the Westchester county health department was organized, it has regularly inspected all public and semipublic bathing places in the district, and has done its share toward stimulating communities on the river and sound to improve conditions. Sewage discharges into Long Island Sound and the Hudson River are chlorinated under the department's supervision during the summer, and the district's more than a hundred public and semipublic bathing places operate under health department permits.

The department takes a census several times a year of germs living in pools and near beaches, and the water must be reasonably uninhabited. Toilets are required, and so are foot baths in dressing rooms to prevent "athlete's foot." Suits and towels must be washed with soap and hot water. There must be a lifeguard; and at artificial pools, spectators are not permitted on walks next to the water. Violation of these requirements leads to the closing of one or more pools or beaches each year.

Safeguarding the milk supply is equally as important as protecting water. When properly carried out, pasteurization—a process of heating milk to 143 degrees Fahrenheit (the boiling point is 212)—kills all dangerous germs, and makes milk safe to drink. Pasteurization of the entire supply is the aim of health departments everywhere.

Nine-tenths of the milk drunk in Westchester in 1929 was pasteurized, though the method of pasteurization was sometimes inadequate. Now all but 2 per cent of the milk sold in the county health district is pasteurized by modern methods. Your milkman is stopped unexpectedly at frequent intervals by a department inspector who tests the tempera-

ture of the milk on the wagon and takes samples for laboratory examination to find out whether pasteurization was complete and whether the milk was contaminated afterwards.

The law says milk must be as cold as 50 degrees Fahrenheit when it is placed on your doorstep, and more than nine-tenths of the milk tested in 1940 was at this temperature. The same year 91 to 97 per cent of the pasteurized milk and four-fifths of the raw milk sold was reasonably free from germs.

As a further safeguard, a veterinarian gives the cow which furnishes your milk and cream a complete physical examination periodically, and an inspector checks up on her environment. The chances are she is not a resident of Westchester. She is more likely to live on a farm several hundred miles away, perhaps in Vermont.

Even before 1930, two-thirds of the milk and cream sold in the health district came from the same sources as New York City's, and was therefore protected to a large extent by New York City inspection. Otherwise, milk dealers who supplied more than one community had to obtain a permit from each village or township, but these permits meant little, since the part-time health officers were in no position to determine the condition of all sources. If milk came from outside his jurisdiction, the health officer accepted any evidence of supervision he could get.

This haphazard control made trouble. Contamination of a certified but raw milk supply resulted in an epidemic of diphtheria in White Plains, Port Chester, and neighboring towns in 1920. Raw milk caused fourteen cases of dysentery in Port Chester the next year, and outbreaks of scarlet fever in Ossining and Croton. In 1924, raw milk led to an epidemic of paratyphoid fever in New Rochelle and its vicinity.

Such epidemics no longer occur, and the department's sanitation men have met still another milk-borne disease. Undulant fever, which is transmitted through raw (but not through pasteurized) milk, or is contracted from butchering cattle, has almost gone out of existence since establishment of the health district.

This disease, which usually disables its victims with recurring attacks of fever and rheumatic pains, was made reportable in July, 1929, following application of a new blood-test diagnosis. Seventeen cases were reported during the next five years, and ten from 1935 to 1939. There has been only one case since the end of 1939, and that case was probably contracted in butchering a cow rather than by drinking milk.

Undulant fever in man and contagious abortion in cattle were proved to be of the same origin in 1918. Germs of the same type which cause them were originally discovered many years previously on the Mediterranean island of Malta. The disease then was called Malta fever, and was traced to milk from infected goats.

The department's veterinarian in 1931 and 1932 found that a third of the cattle suspected as sources of human undulant fever cases were infected with contagious abortion. The situation of all these herds today is not known because contagious abortion spreads rapidly among cattle, and because funds are lacking for frequent extensive testing.

However, veterinarians regularly test herds furnishing Special A raw milk, a potentially dangerous grade, and eliminate infected cows. For some years, the proportion of infected cattle in such herds has proved less than one per cent.

In its program of milk control the department has inspected all dairies serving the district (except those inspected by New York City or the state) no matter how far away the dairy is. To insure cleanliness, satisfactory equipment, and proper handling of milk, the milk sanitarians also inspect shipping stations, pasteurization and bottling plants—wherever milk to be sold in the district is handled. This means several hundred of each type of inspection a year.

As a result of all these precautions, the only other cases of milk-borne disease discovered in the last ten years in the health district were a few mild cases of diarrhea caused by raw milk. Some of these cases developed in 1934, when a milk truck traveling through the county was wrecked, and people rushed to obtain free milk. All other cases occurred on a farm the next year.

Milk isn't the only food that gets attention. The department inspects processing and handling, and sees that all varieties of food and drink are properly handled in public eating places. Often there is little danger of disease under modern conditions. The inspection is largely to promote common cleanliness—and because spoiled and infected products are unattractive and unpalatable.

The United States Department of Agriculture, the United States Public Health Service, and the State Departments of Agriculture and Markets, Labor, and Conservation sometimes inspected slaughterhouses and other processing plants before the county health district was organized. In Westchester, however, outside of White Plains and Ossining, there was little inspection of stores, markets, restaurants, hotels, ice cream plants, bakeries, cider mills, or poultry markets.

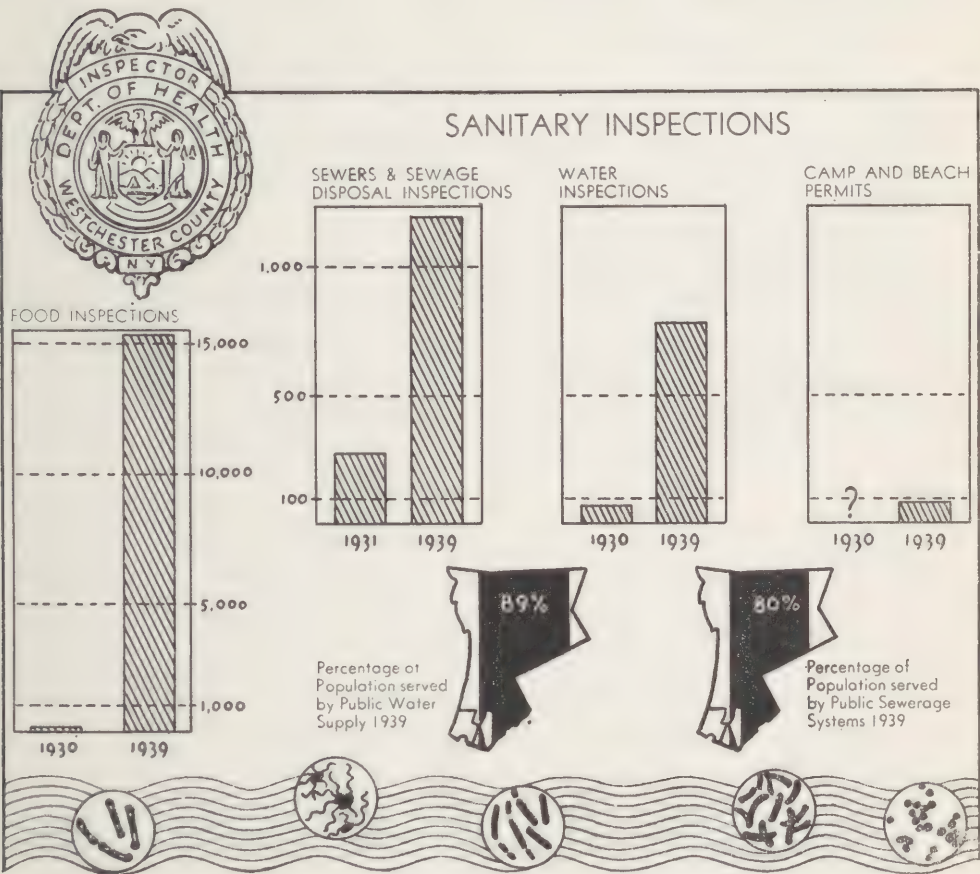
Nevertheless, the only serious epidemic due to food other than milk in the decade before 1930 was typhoid fever in 1924 and 1925, caused by oysters from germ-infested waters off Long Island. The outbreak, which affected a number of American cities, led to tightening of state and federal control of the shell-fish industry, and there has been no similar occurrence since in New York State.

Nowadays each of the three slaughterhouses in the health district, and all food-processing plants such as poultry markets, ice cream factories, and bakeries operate under permits from the department, and are inspected often. Permits are not required for stores and markets, but the department inspects them, and all who peddle food from door to door must have permits. All eating places, from hotels to lunch wagons, must have permits, and are inspected frequently. A similar system of inspections and permits controls the county's camps.

Despite all this care, the department is almost powerless to control trichinosis, a disease caused by a parasite which burrows into the large muscles of hogs. It is impracticable to examine in the laboratory every piece of pork sold, and there is no other way to tell whether a piece of pork is free from the parasite.

Trichinosis is known to be more prevalent among hogs fed on uncooked garbage than among others, and efforts are being made in hog-raising sections to control feeding. Otherwise, about the only thing the department of health can do is to urge that pork always be thoroughly cooked, since cooking kills the parasite.

Autopsies indicate that more than a tenth of all persons are infected with this disease at some time in their lives. Comparatively few are known to have been made ill by it, but when they are, the illness may be extremely serious. Trichinosis was made reportable in New York State in 1930. Its history in Westchester prior to that time is unknown, but several



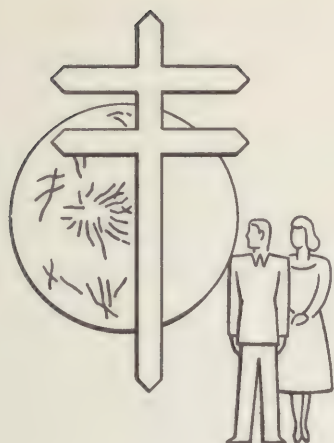
cases have been reported in the health district every year since then, the largest number in any one year being twenty-two, in 1933.

Strict supervision of the handling of food, although of little value so far in preventing trichinosis, reduces to a minimum such outbreaks as the cream-puff epidemic of a few years ago, when the department's health detective, or epidemiologist, traced hundreds of cases of diarrhea, all reported within a few hours, to the germs on a baker's infected finger.

As a result of this experience, the county board of health adopted rules requiring heating of custard-filled pastries to a temperature high enough to kill germs, and continuous refrigeration thereafter until sold. The epidemic was also a lesson to the department's inspectors to educate foremen to be alert for the slightest infection.

To make sure the food you eat is clean, the department makes 20,000 inspections a year, exclusive of those for milk control. It prosecutes from thirty to seventy firms or individuals a year for violations of its rules, about half for infractions of milk regulations and half for breaking other food laws.

Inspection, laboratory tests, regulation—these and many other modern instruments of health service are used by the division of sanitation. The history of public health has no more stirring chapter than that of the struggle against disease borne by food, water, and sewage. And there is no function of the service which has met its promise more effectively.



THE SUBTLE KILLER

TUBERCULOSIS still causes more suffering, breaks up more families, and costs more money in Westchester County than any other communicable disease. Two hundred persons in the county die each year of the white plague and about half these deaths are in the county health district. Of those in the district, a fifth are Negroes, although Negroes compose only a twentieth of the population.

Inhabitants of every single place in the county—city, village, or township—have become ill with tuberculosis during the last five years, and in all but two communities, both sparsely settled, there have been deaths from the disease in the same period.

Some germs strike openly and fiercely. They kill or seriously injure their victims in a few days, or are themselves killed because the very intensity of their attack provokes the person invaded to fight back. The tuberculosis germ is seldom hasty. This germ may live long in a human being, even for life, without making its presence known—which means that the war against tuberculosis must be an ever-continuing struggle, rather than a brief campaign.

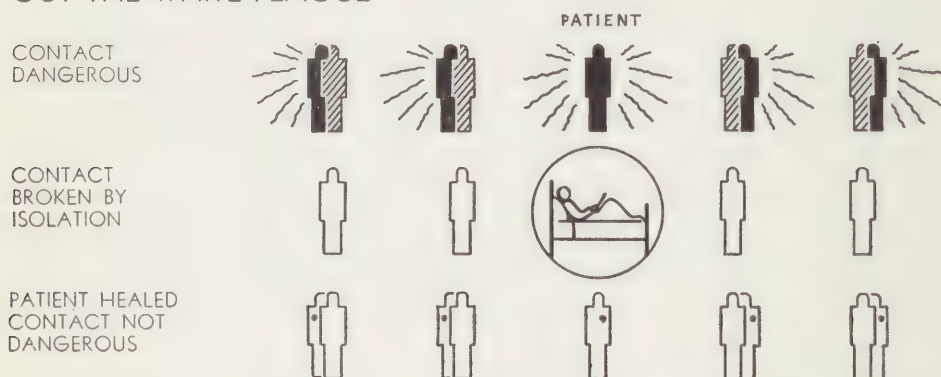
It means that a person may cough up millions of germs as he goes about, and not know that he is ill. As ordinarily examined under a micro-

scope, tuberculosis germs look like bright red rods. If they were visible in this form to the naked eye, one would see every now and then a man or woman on the street coughing up showers of red rods.

Folklore to the contrary, tuberculosis is not hereditary. But it *is* ten times more prevalent in families where somebody is constantly showering germs on other members of the household. The germ spreader may be rich or poor, an executive or a janitor, a society matron or an old woman on relief.

Isolation in a hospital or sanatorium is the most direct way we have to wipe out the disease. We think of such institutions as places to cure tuberculosis or to ease the suffering of its victims, but they are also built for a broader humanitarian purpose—to keep sufferers from casting the white death on healthy people.

ISOLATION OF TUBERCULOSIS CASES IS THE BEST WAY TO STAMP OUT THE WHITE PLAGUE



There are 349 hospital beds in Westchester County reserved for victims of tuberculosis, exclusive of those in boarding homes. The tuberculosis division of Grasslands Hospital, which serves the whole county, has 264; Gray Oaks Hospital, which serves Yonkers only, has 55; there are 20 at the House of Rest, a private institution, and 10 available at Peekskill Hospital.

This is less than two beds for each annual death, the ratio accepted as minimum. Beds in state tuberculosis hospitals are intended for persons

in counties without institutions of their own. However, a few Westchester patients are sent to them and some are admitted to other sanatoria outside. Still others are isolated in thirteen boarding homes. These homes, which the health department supervises, are intended for chronic cases not requiring hospital care.

Grasslands Hospital had a waiting list up to the end of 1938, but its bed capacity has been increased by twelve since then. Although apparently sufficient now, the number of beds may not satisfy future needs. The hospital serves the whole county, and the demand for its use depends upon the effectiveness of the hunt for germ spreaders in the entire area, including the three cities outside the county health district.

The health department's entire war on tuberculosis is directed toward this one thing: finding and isolating every germ spreader. Its efforts have been fairly successful. So far as can be determined, there are few areas near large cities with a better record. We have a long way to go, however, before we reach the goal of isolating every active case.

The search has proceeded in Westchester for many years. Since 1919, the Westchester County Tuberculosis and Public Health Association has exhorted people to see their doctors frequently, and otherwise taught them to take part in the fight. Before 1930 the state department of health conducted occasional clinics in the county, and in 1927 the outpatient service of Grasslands Hospital started holding clinics outside the hospital and sending nurses to follow up cases in the home.

The county health district was not fully covered, however, nor was state and local work coordinated. The county health department organized its tuberculosis division in 1931, and attendance at tuberculosis clinics was doubled in twelve months. Following these initial efforts to report new cases, their number increased from 312 in 1930 to 486 in 1931.

The department is well equipped for the search. It has a full-time tuberculosis specialist, with an assistant specially trained in diagnosis. They have no hospital responsibilities, and thus can devote all their time to the work. The department also employs three doctors for part-time

clinic service, and three full-time X-ray technicians. A sixth of the time of the department's thirty-four nurses is devoted to tuberculosis work.

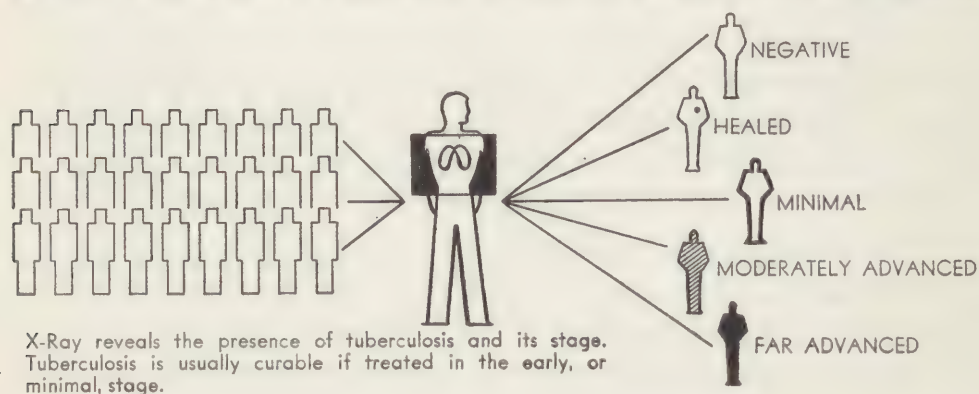
Between 450 and 500 tuberculosis clinics are held each year throughout the health district, varying from one a year in hamlets to regular weekly or monthly clinics in villages and to semiweekly ones in White Plains. Special night clinics are held from time to time.

From 7,500 to 8,500 persons attend the department's tuberculosis clinics each year, nearly half of them for the first time. In this way the department finds nearly 140 new cases a year. Over two-fifths are early, or what the doctors call minimal; 33 per cent are moderately advanced, and 24 per cent are far advanced. The early and moderately advanced cases can be cured, or improved by treatment. Isolation of those in which the disease is far advanced will keep them from spreading it, and often helps them.

Thoroughness is the keynote of the tuberculosis clinics. A nurse arrives first, with records, thermometers, and other supplies. Then comes a technician with one of the department's four portable X-ray machines, followed by a doctor. The first of the fifteen or twenty patients who have appointments appears, and work begins.

First the nurse questions the patient about his present and past illnesses, and those of his parents and family. Then he has a physical examination, and most important of all, his chest is X-rayed. This kind of

ONLY THE X-RAY RELIABLY DETECTS EARLY TUBERCULOSIS



chest examination is the only positive way to detect tuberculosis early enough to do much for the patient. Any resident of the health district may have a chest picture made free for the asking. A report of the examination is sent to the individual's own doctor.

The department's hunt for the germ spreaders begins in the homes of those known to have the disease. The law requires doctors to report every case they find, like that of any other communicable disease.

When a case is reported, a department nurse visits the home, and does all that she can to help the patient and family. She gets a list of everyone living in the home, and tries to persuade them all to have chest pictures made—either by their own doctor or at a clinic.

A strong effort is made to get every sufferer to go to a hospital. In any case, treatment is begun at once, and the patient is warned and taught how to protect others.

Then the department tries to keep every contact—as doctors call an individual who has lived in the same household with a germ spreader—under observation for at least five years after exposure. The same contact may go to a clinic many times before he is positively diagnosed, or is discharged as free from alarming lung shadows.

Thanks to this concentration on the households of patients, the age of cases found in the clinics among contacts is four years younger than that of cases in the general population. Also many more of the cases among contacts are in early and hopeful stages of disease.

In 1935, the department established a special tuberculosis register, which now contains cards for more than 8,000 persons—including those who have the disease and those who have lived in the same household as germ spreaders. This file permits the director of the tuberculosis division to follow each case and contact, and also to measure the ground gained.

There are about 2,500 families with tuberculosis in the health district, and the department has a list of the contacts in all but four or five

hundred of them. Most of those for whom no contacts are listed are under the care of private doctors.

Sixty-five per cent of the adults who have been exposed have been examined, and 89 per cent of the children under sixteen years old. It is much easier to get children to clinics than adults, but the proportion of adult contacts examined is considered high, being much better than the state average.

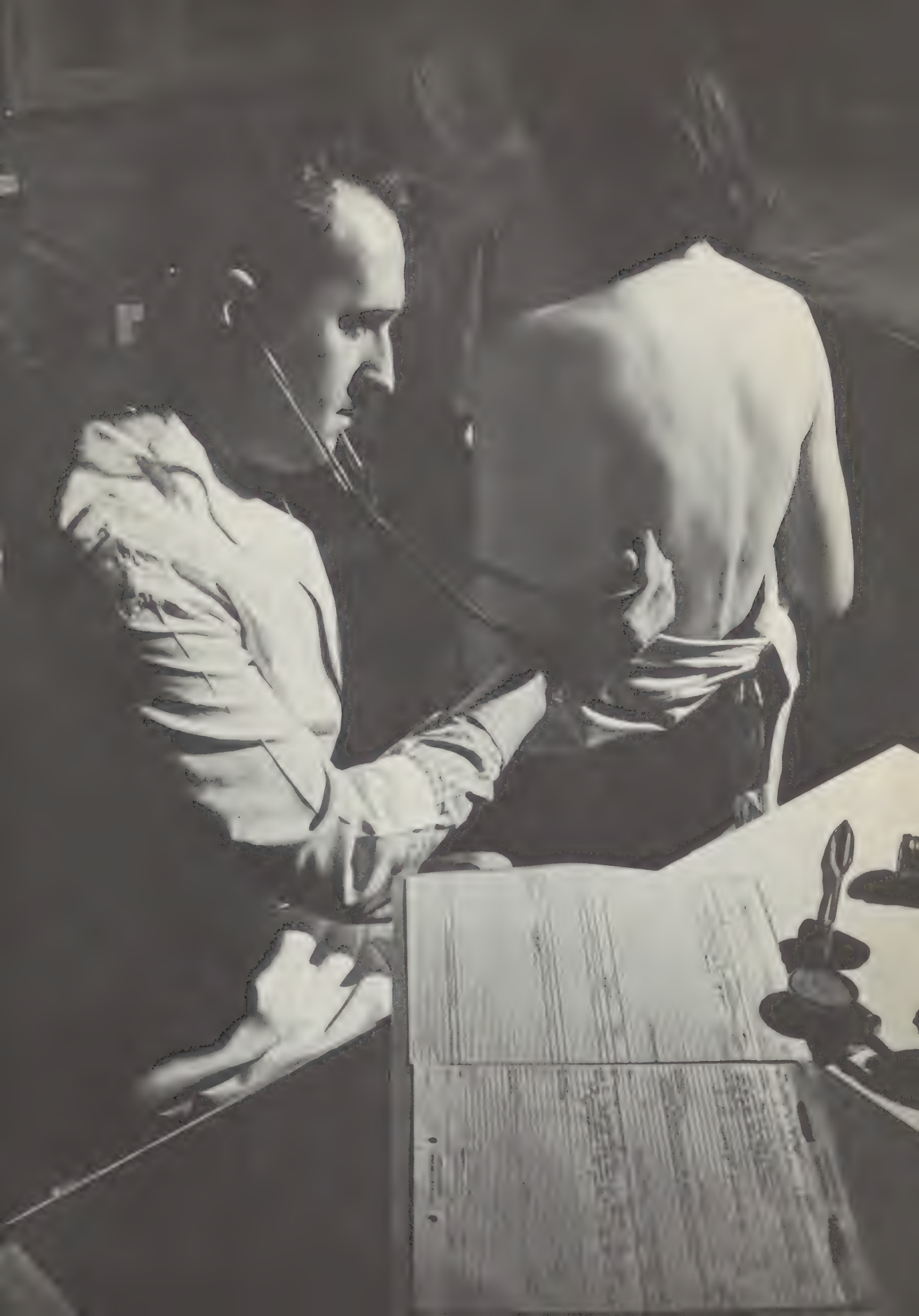
Surveys in schools have been a popular method of searching for germ spreaders. Although such surveys have in recent years been largely restricted to X-ray examinations of high school graduation classes, the department has nevertheless made 19,000 chest pictures of school children, and has made the tuberculin test on 10,000 others.

Less than half of one per cent of those examined have been found to have the disease, compared to 7 per cent of those exposed to it. Although wholesale school examinations have some educational value, the health department believes that its major efforts should be directed toward persuading contacts to be examined.

There are several kinds of tuberculosis germs, of which at least two may cause the disease in man. One of these prefers man, the other prefers cattle but will attack a human being. When it does invade a human, this bovine variety usually causes a disease of the glands of the neck, which our parents knew as scrofula, or else a disease of the bones and joints, instead of tuberculosis of the lungs.

Raw milk is the usual highway used by the bovine variety to invade man. In Westchester County the drive to wipe out these germs began in 1919; but in 1931, when a full-time veterinarian was added to the department's staff, a fifth of 5,936 cattle tested were found to be infected. A vigorous campaign was started, and in three years the proportion of cattle infected had been reduced to less than one per cent. Veterinarians still test from 4,000 to 6,000 cattle every year, and the percentage infected remains the same.

As a result, doctors in Westchester rarely see scrofula, or bone and joint tuberculosis any more.



TUBERCULOSIS

COUNTY HEALTH DISTRICT

1915-1919



CASES

DEATHS



1920-1924



1925-1929



1930-1934



1935-1939



NEW YORK STATE Exclusive of New York City

1915-1919



CASES

DEATHS



1920-1924



1925-1929



1930-1934



1935-1939



Each symbol represents 20 per 100,000 population

STAGE OF CASES

COUNTY HEALTH DISTRICT 1932-1939

KNOWN CONTACTS

OTHER CLINIC CASES

MINIMAL



MODERATELY
ADVANCED



FAR
ADVANCED



Each symbol represents 5 per cent

EXAMINING FOR TUBERCULOSIS



CASE
HISTORY



TUBERCULIN
TEST



CHEST
EXAMINATION



X-RAY
EXAMINATION



SPUTUM
EXAMINATION

Although the county has a long way to go before pulmonary tuberculosis is wiped out, the county health department has made considerable progress in the war against it—more, indeed, than against most major killers. Ten years ago Westchester was ahead of state and nation—as it is in the war on most diseases—but 150 persons died each year of tuberculosis in the health district. Now 89 die, a saving of 61 lives yearly. Here the district pulls away ahead of state and nation.

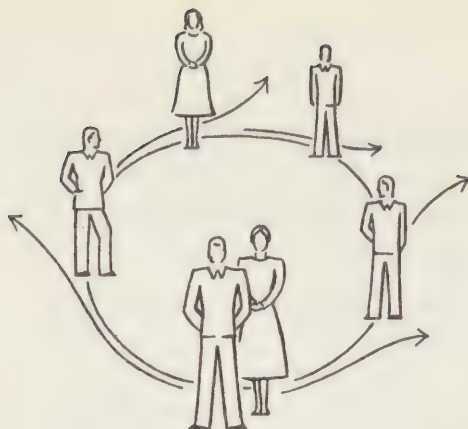
The tuberculosis death rate among Negroes, while still high, has declined to a marked degree.

Just about as many new cases of all kinds are reported each year as in 1930, largely as a result of the continuous and vigorous search for them. The average age of those “catching” the disease is increasing, however, which means that fewer young people are infected than formerly, and that we are mopping up the residue of undiscovered cases among old persons. The proportion of school children showing infection, as measured by the tuberculin test, is decreasing at a remarkable rate.

And, in recent years, new methods of treatment have made cures more likely, if only the cases are found early enough. Many cases are arrested, if not cured, by collapsing the diseased lung. Operations on a nerve in the diaphragm and removal of ribs often saves lives which formerly would have been lost.

But 200 moderately or far advanced cases are still reported in the district each year, and all these are germ spreaders. Worse, 28 of the fatal cases are not reported until after death, and another 13 are reported in the same year in which they die, which means 41 have been spraying death on their friends and relatives for years. And half the known germ spreaders, the active cases with holes in their lungs, are at home instead of isolated in hospitals.

Indeed, the drive against tuberculosis must go on relentlessly. But major advances have been made, and the goal, complete eradication of the disease, is almost in sight.



SYPHILIS, THE SABOTEUR

SYPHILIS is perhaps one of the greatest killers, because on death certificates it often hides behind other conditions. If it is not treated, or if treatments are stopped too soon, it may eventually cause softening of the brain, paralysis, blindness, or heart disease. Yet it is one of the very few ills for which medicine has an almost perfect cure.

As in the war against tuberculosis, the main problem is to catch the germ spreaders early, and to make sure they are treated until they are cured or at least made non-infectious. Unlike tuberculosis, spreaders of syphilis can be quickly rendered harmless to their associates by specific treatment. But, as in the case of the white plague, they must remain under medical care for a long time.

In the past this care has been given in doctors' offices and clinics. However, it has recently been found that infectious syphilis can often be cured in a few days by a new method of treatment requiring that the patient be hospitalized. As much arsenic, in the form of mapharsen, can be given safely in five days as it took a year to administer by the old method. Grasslands Hospital began treating patients in this way in November, 1940. Ultimately it is hoped that it will be declared safe to give the so-called

“five-day treatment” outside of hospitals, making possible its use at clinics.

Malaria germs, typhoid vaccine, and fever machines have been used for several years to treat syphilis of the central nervous system. Experiments in progress indicate that a combination of one of these methods of creating artificial fever, with massive doses of arsenic, will cure nearly all cases rapidly, or at least arrest the disease.

At present, however, treatment at clinics is a long process, generally requiring a year to make the patient permanently non-infectious. Twenty treatments with an arsenic compound and twenty with bismuth or mercury are considered necessary for safety, and these are spread out over a year or a little less. Federal and state funds provide these drugs.

Salvarsan, mapharsen, and other arsenic compounds are injected into the veins. Since many treatments are required, it is sometimes difficult to persuade people to return for them. Moreover, some patients feel entirely well after a few doses, or even better than usual because arsenic has a tonic effect.

A few treatments by the method still used in clinics cure the sores and eruptions which characterize the early germ-spreading stage, but if the treatments are stopped, the sores may return. They disappear after a few months or a year regardless of treatment—but the patient who stops treatment usually has time to spread the disease, and also to regret that he stopped, for syphilis kills slowly as though it savored suffering.

As a rule the patient is not very ill during the germ-spreading stages, and perhaps a fourth of those who “catch” the disease go through both the sore (primary) and the eruptive (secondary) stages without suffering ill effects later. After some years, the remainder, unless treated regularly, may develop softening of the brain, paralysis, blindness, heart disease, or a combination of these.

So long as such conditions do not exist the chances of their developing can be reduced, and even if serious complications have arisen, they can be arrested or improved by treatment. The health department treats cases which are no longer infectious, in the hope of reducing suffering,

death, and economic loss from insanity and other disabling illnesses. Such patients constitute the bulk of those attending public clinics.

The department's nurses (who make a thousand home visits a year in the fight to control syphilis) try to get these patients to return, as well as the germ spreaders. A third of the nursing visits are to observe reactions from treatment, to refer patients to heart, eye, and other special clinics, and to arrange for the spinal fluid tests which reveal whether germs have established themselves in the nerve tissues.

Nearly half the visits are to potential germ spreaders who have started treatment, then stopped before they were cured. All who have syphilis and are being treated are considered potentially infectious for two years after they contract the disease, and all women of childbearing age are regarded as potentially infectious. Pregnancy makes syphilis milder, and if a syphilitic woman is treated before the fifth month her baby will probably be born healthy.

A sixth of the nurses' visits are to people suspected of having the disease. A report that an individual has early syphilis is fairly good evidence of at least one other person similarly afflicted. Often there is more than one: the source of infection may have given the disease to several people, and the patient may have had relations with others after contracting it. There must be an endless chain of transmission to keep syphilis alive, but unfortunately each link may start a new chain.

The silvery corkscrew-shaped organism which causes syphilis is puny, living only for a short time outside the body. The disease is usually transmitted by intimate contact such as kissing and sexual intercourse.

In spite of statements to the contrary, syphilis is not spread through water, food, or milk, and very rarely, if ever, is it transmitted by germ-laden towels and clothing.

Theoretically, it should be much easier to control syphilis than tuberculosis or diphtheria, in which the germ spreaders may infect friends and relatives. But, from fear or misplaced chivalry, a patient often seeks to conceal the source of infection.



SYPHILIS



CASES REPORTED



1937



1938



1939



1940

Each symbol represents 150 cases

CLINIC TREATMENTS



Each symbol represents 1000 treatments

AGE GROUPS (1937-1940)

UNDER
20 YEARS



20-29 YEARS



30-39 YEARS



40-49 YEARS



50-59 YEARS



60 YEARS
AND OVER



Each symbol represents 12½ cases

The department has lacked facilities to trace every source, but it tries, and succeeds in many instances. When a thorough investigation can be made, the department usually can obtain the names of six sexual contacts for each five patients with early syphilis. It is able to locate half of these and bring them in for examination. More than four-fifths of these persons have the disease, but not all in a germ-spreading stage.

Modern control of syphilis goes back to 1918, when Congress enacted the Chamberlain-Kahn Act, making money available to states for control of venereal disease. Prior to 1930, three clinics were established within the limits of the county health district. The county health department took over one of these, the White Plains clinic, in 1931—when the city abolished its own health department and joined the county district—and immediately started its drive, which still continues, to bring in patients. Because of this drive and the inauguration of night clinics, attendance at the White Plains clinic rose from 388 in 1930 to 816 in 1931 and 2,521 in 1932.

Surveys showed a need for clinics in other parts of the county, and they were established at Tarrytown, Mount Kisco, and Peekskill in 1933 and 1934. About the same time a clinic was opened under private auspices at the Lawrence Hospital at Bronxville. In 1936 clinics were started at Greenburgh and Mamaroneck. The Mount Kisco clinic was discontinued in 1938 because of poor attendance, but at the end of 1939 the department was operating syphilis clinics in six communities.

Night sessions were held at each place, with separate sessions for men and women in the larger communities. Anyone in the district may go to a department clinic for diagnosis or emergency treatment. If able to pay for subsequent care, he is afterwards referred to a private doctor.

The clinics are manned by doctors who work for the department on a part-time schedule. One of the deputy commissioners devotes part of his time to supervising syphilis control, but the department has no physician devoting full time to it, as in the case of tuberculosis.

Attendance at clinics reached its peak in 1938, when there were 17,638 visits. Since then, the department has increased its effort to weed

out the chronics who keep going because they like the tonic effect of arsenic, or to meet their friends, or because clinic doctors have failed to discharge them even though their cases have been arrested.

Like tuberculosis, syphilis is more prevalent among Negroes than among the white population. Most men who contract the disease become infected during their twenties and thirties, and most women between fifteen and thirty years. The disease is more common among men than women.

The state syphilis control program was drastically revised and widely extended in 1935. New appropriations were obtained, and a more accurate system of case reporting was established.

Under the new system, a report must be signed by the attending doctor. If he or the patient desires, a physician may report a case by the patient's initials and date of birth instead of by name, in order to prevent identification of the individual.

The county department adopted this new reporting system in 1936, and since then an average of 95 germ-spreading cases have been reported every year—about the same rate as for the rest of the state outside New York City. Undoubtedly many early cases are not reported; 650 late cases are reported annually, and 60 of persons born with the disease.

Two new laws enacted by the legislature in 1938 may help the

CLASSIFICATION OF REPORTED SYPHILIS CASES (Total 1936-1940)



Each symbol represents 75 cases

drive to wipe out syphilis. One requires a blood test before marriage, and the other a similar test during pregnancy. The marriage law, which went into effect July 1, 1938, brought 41 cases to light in its first year. The prenatal test became mandatory on January 1, 1939, and resulted in the report of 13 positive blood tests in 1939 and 55 in 1940.

In cooperation with the Westchester County Tuberculosis and Public Health Association, the department entered on an intensive program of popular education in syphilis in 1936. This is still carried on by means of lectures, discussion groups, exhibits, and distribution of pamphlets.

The new syphilis control program has been in effect only a few years, but there is already evidence of remarkable progress toward eradication of the disease. In New York State as a whole, and in the county health district the number of new cases reported has reached its peak and is declining. Early cases are becoming fewer and fewer with startling rapidity; 120 early cases were reported in the health district in 1937, but only 85 in 1939 and 77 in 1940. Cases in children under fifteen (that is, those born with the disease) dropped from 27 in 1937 to 18 in 1939, and to 17 in 1940. Grasslands Hospital admits fewer sufferers from syphilitic heart and brain disease than it did a few years ago.

It may well be that by the end of the next decade the battle against syphilis will have been won, and it is certain that the tide will have been turned against this foe.



THE LAME, THE HALT

ONE of the inspiring stories in the annals of science is that of the fight on crippling conditions. Slow but sure advances in the treatment of infantile paralysis and of deformities caused at birth hold out renewed hope for the lame and the halt.

Modern orthopedic surgery has performed miraculous feats with bone-grafting, silver wires, and delicate nerve operations. Moreover, the knowledge of how to exercise damaged muscles back to normal, and how to use skillfully contrived braces, massage, and special baths have increased greatly the chance for the crippled to lead a normal life.

Those deformed by injuries at birth (and that means more than a fourth of all crippled) used to be consigned to the life of mental defectives, largely because of their inability to coordinate muscular movements. When all deliveries are more expert, the number of these unfortunates will be considerably reduced. But for those already deformed, expert training can teach them how to live with their deformity and permit them to become, in some instances, valuable citizens in the community.

Both public and private agencies have joined in the organized effort

against the dread infantile paralysis, because of the virulence of the disease and the many difficulties faced in tracing it and checking its spread.

A fourth of those left paralyzed by infantile paralysis (and they compose a third of all the crippled) get entirely well in a few months. In the attempt to make the remaining three-fourths whole again, modern science has developed a system of surgery, braces, exercises, massages, and baths. These, together with time and rest, sometimes work a cure.

Like the savage who is puzzled because he cannot see the bullet which wounds him, we are baffled to a considerable extent because we cannot see, even through our most powerful glasses, the germ that causes infantile paralysis.

We know that an organism called a virus and too small to be seen causes it. But there is no way of telling who carries it about, unless these persons are made ill. During an epidemic, we are sure, many times as many carry the virus around with them as are ever made ill by it.

New York State has been fighting crippling conditions since the infantile paralysis epidemic in 1916, by far the largest and most serious in the country up to that time. After this catastrophe, the state department of health organized clinics that traveled over the state prescribing and adjusting braces, and giving and prescribing other treatment to correct the deformities left by the disease. Also surgical operations were performed under state auspices.

In 1924, a temporary state commission was appointed to study the whole problem of crippled children. It approved the work being done by the state, but stressed the need to widen the scope. Two years later, long before most states recognized the need for special appropriations, the state began providing medical care and education for the physically handicapped. Now crippled children are treated on application through the Children's Court, the state paying half the cost and the local community half. These children may be sent to local hospitals or to a state institution at West Haverstraw.

The state department of health organized a special division of orthopedics in 1929, a year before creation of the county health district. The state had held traveling clinics in the district for at least ten years, but increased the number after formation of its new division. The state health department had long had on its staff nurses trained in massage and other treatment for cripples. When the county health department was organized, the nurse in this area was transferred to the county payroll, and the county department at the same time took over the state's clinics for cripples in the district. Previously the nurse had been trying to cover four counties; now her work was restricted to the county health district.

Clinics are operated by Grasslands as well as by the department, and the chief of the hospital's orthopedic service is also the part-time clinician for the health department. Thus hospital and health department work closely together. Twenty or more clinics are held in the health district each year, ranging from a monthly one in White Plains to one a year in small communities.

Nearly 300 patients are seen each year, and the number of clinic visits exceeds 600. Patients are referred by private doctors or by nursing and medical agencies.

Most of the work comprises supervision of home exercises, adjustment of braces, and advice. Whatever treatment is prescribed besides that possible at home is provided through the Children's Court, welfare officers, or private organizations.

The orthopedic nurse makes 800 to 1,400 visits to cripples' homes each year. She arranges for clinic appointments, and urges that delinquent patients be brought back. She teaches the mother or attendant how to care for the patient, and demonstrates exercises and massage. She adjusts braces and frames, and shows the mother how to manage them. In general, she helps ease the situation caused by having a cripple in the family—advice which sometimes prevents the breaking up of a home.

There have been two serious epidemics of infantile paralysis since the department was organized, one in 1931 of 166 cases, and one in 1935



CRIPPLING CONDITIONS

(Under 21 Years of Age—1940)

CAUSES

BORN WITH
MALFORMATION



NERVE INJURY
PROBABLY AT
BIRTH



INFECTIONS OTHER
THAN INFANTILE
PARALYSIS



ACCIDENTS



FAULTY NUTRITION



BONE TUMORS



DISPLACED OR
DISEASED
CARTILAGE



UNCERTAIN
CAUSES



INFANTILE
PARALYSIS



Each symbol represents 5 cases

CLINIC ATTENDANCE

1930-1934



1935-1939



Each symbol represents 30 visits

NURSING VISITS AND CONFERENCES

1935-1939



Each symbol represents 50 visits and conferences

of 109. In both epidemics the department provided consultation, including the taking of spinal fluid specimens for diagnosis. In both years nine-tenths of the patients with paralysis were sent to hospitals. The nurse saw each patient who remained at home as early as possible, and urged precautions to insure the absolute rest which is essential during the acute stage.

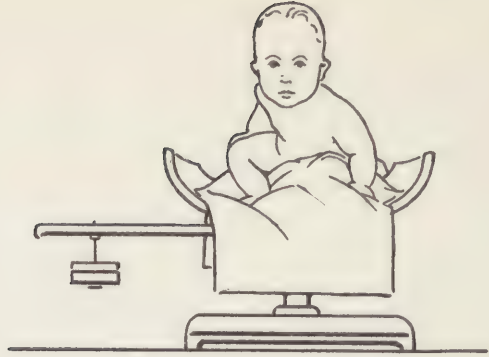
The department maintains a register of cripples. Doctors are required to report only the infantile paralysis cases, but voluntary reports of others are obtained from them and from hospitals, clinics, schools, and charitable agencies. There were cards for 663 cripples under twenty-one years old in the register at the end of 1940. This is a rate of 2.2 per thousand of population. It is almost the same as that in New York City, as determined by a recent survey.

Besides the third left paralyzed by infantile paralysis and more than a fourth deformed by injuries at birth, 12 per cent were crippled as the result of other infectious diseases and 5 per cent by accidents. The remainder were due to various causes.

No two cases are alike, whatever the cause. Infantile paralysis, however, remains the chief offender. From 1930 to 1940 there were 464 reported cases in the district.

The Westchester Chapter of the National Foundation for Infantile Paralysis was organized in 1939. It is trying to find everyone in the county who is suffering from the after-effects of the disease, and to help all for whom assistance is not readily obtainable from other sources.

The future offers much hope for preventing crippling conditions. Effective accident prevention work is increasing. Expert help can reduce materially the number of those injured at birth. Besides research under other auspices, the National Foundation for Infantile Paralysis is spending hundreds of thousands of dollars searching for a serum or other means of preventing and curing that disease. The time and money spent is bound to yield results.



BORN TO LIVE

THE right to life of mother and child has been recognized as a major responsibility of modern society. This challenge to life has been met by many agencies, official and voluntary. Many different individuals—the parents themselves, doctors, social workers, teachers, and nurses—have joined the crusade. In Westchester, we find the health department, County Medical Society, visiting nurse organizations, departments of welfare and church and school groups enlisted in the drive to protect mothers and children.

These activities cover a broad, complex field. They begin with efforts to put all expectant mothers under medical care to eliminate or reduce the dangers of childbirth. Through educational measures, all mothers are urged to seek the care of a private physician or from clinics, early in pregnancy.

There are eleven prenatal clinics in the health district. Nine are operated by hospitals, one by a visiting nurse organization, and one by the county department of health in an area not otherwise served.

The routine of all these clinics is much the same. The mother's history is taken and she receives a complete physical examination, including a

pelvic examination so that abnormalities can be detected. Her blood pressure is taken, and urine examinations and blood tests made. Then the mother is advised to visit her physician or a clinic once a month up to the seventh month of pregnancy, and every two weeks thereafter.

Public health nurses attend all prenatal clinics, observe the progress of patients, and visit them at home afterwards. They urge delinquent patients to return, and teach the mother and father how to prepare and care for the new baby. In addition to home instruction, mothers' classes for pregnant women also are held. Here and at home the nurse teaches how to make a layette, how to bathe the baby, prepare formulas, sterilize bottles, and how to massage the breast. Unless the doctor advises against it, breast feeding is urged.

About 500 prenatal clinic sessions are held annually in the district. They are attended by more than 1,200 women. Each mother visits the clinic an average of six times. Presumably most of the remaining mothers, being from higher income groups, also receive prenatal care.

Official and voluntary agency nurses make nearly 5,000 visits a year to the homes of prospective mothers. Women enrolled for the nursing services total 27 per cent of all births and stillbirths. Mothers receive an average of five visits before the birth of the baby and four afterwards. Both these averages exceed recommended standards.

Westchester mothers nearly all go to the hospital to have their babies. Only about 6 per cent of infants in the district are delivered at home, and even in the rural sections the percentage of home deliveries is less than 25. There are only eight licensed midwives in the health district, who attend only fourteen deliveries a year.

Great care is taken to safeguard the lives of mothers in childbirth, particularly against the dreaded scourge, childbed fever. Advances in medical knowledge and skill have almost erased in enlightened communities the crime of childbed fever caused by dirty hands and instruments. In Westchester County, hospital facilities and the work of doctors mitigate strongly against this condition. The Special Commission on Mater-

nal Welfare of the County Medical Society has done much to raise standards of childbirth practice, and has persuaded hospitals to classify staff doctors according to their qualifications for delivering babies.

The death rate from childbed fever, low in 1930, has since decreased to less than a sixth of its level then, so that only one woman has died from this infection in each of the last two years.

Mothers used to look forward with dread to the first year of the child's life because so many babies died then. Today this period can be faced with more assurance. Foremost in the work of the health service to safeguard very young children is supervision of their milk and water supplies. As a result of these and other measures, the infant death rate has been dropping for a long time, in Westchester and over the nation. The toll from such things as "summer complaint" and diarrhea has receded very markedly. The number of babies in Westchester who die from intestinal disease has declined 92 per cent since 1920 and 70 per cent since 1930.

More than two-thirds of the babies who fail to survive the first year die before they are a month old, and about half on the same day they are brought into the world. Some of these are born prematurely. Other deaths result from difficult labor or malformations. Comparatively few deaths in the first year are from the acute diseases that used to snuff out the lives of so many infants.

Visiting nurses help to keep well babies well. They know when mothers seen in prenatal clinics are due to return from the hospital, and they scan local newspapers for births of which they had no previous knowledge. They try to visit each family having a new baby about ten days after delivery, long before birth certificates are available to them. This first visit comes at a critical time for mother, baby, and family. It is the period when the nurse can do most to adjust the household to the newcomer, and to establish necessary routine. She makes a second visit in a week or so, and several others during the first year. Her work continues until the baby is able to manage affairs in his own little world—such simple things as drinking from a cup and controlling his temper.



BABIES DIE — WHY ?

CAUSES

ACUTE
COMMUNICABLE
DISEASES

RESPIRATORY
DISEASES

GASTRO-INTESTINAL
DISEASES

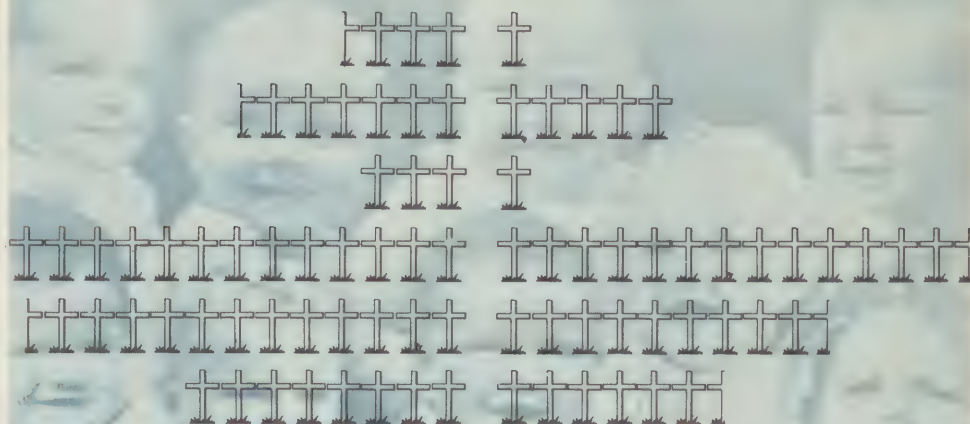
PREMATURE BIRTH

CONGENITAL
DEBILITY
MALFORMATION
INJURY AT BIRTH

ALL OTHER CAUSES

1930-1934

1935-1939



Each symbol represents 1 death under 1 year of age per 1000 live births

DEATHS

1930-1934



1935-1939



Each symbol represents 2 deaths under 1 year of age per 1000 live births

BABIES LIVE — WHY ?

PRENATAL CLINIC ATTENDANCE

1935



1940



Each symbol represents 300 clinic visits

INFANT AND CHILD HYGIENE CLINIC ATTENDANCE

1931-1934



1935-1939



Each symbol represents 300 clinic visits

The nurse urges regular supervision of the baby either by a private physician or at a clinic. The department conducts twenty "well baby" clinics, holding over 500 sessions a year. A full-time baby specialist is in charge of the department's maternal and child hygiene division, and part-time physicians serve at clinics. Over 1000 infants and young children are newly registered at well baby clinics annually, and it is safe to say that more than 30 per cent of babies in the health district are brought to a clinic at some time, nearly all before they are a year old.

As the name implies, the department's clinics for babies are to keep them well. Children with tuberculosis or syphilis are referred to the department's special clinics for these diseases, and those sick or defective from other causes are referred to private physicians, dispensaries, or hospitals.

Mothers receive appointments for a special day and time at the clinics, and each one has her share of the doctor's time. He examines the baby from top to toe, meanwhile discussing health problems with the mother. He talks with her about the feeding, hygiene, and management of the baby, and writes out a program for her to follow.

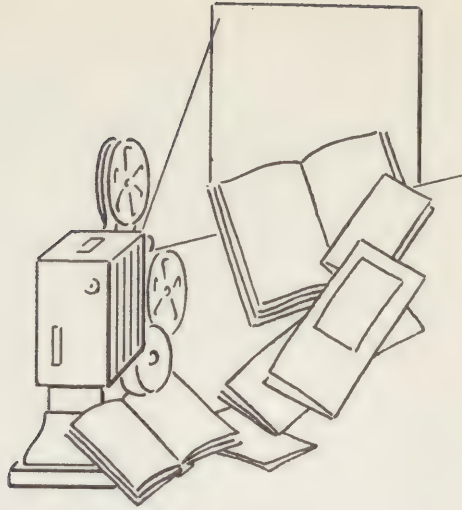
Then the mother learns from the nurse in attendance how to cook vegetables, to make them appetizing and to preserve all the vitamins; how to give cod liver oil so that the baby will like it; what to do to prevent diaper rash. If she cannot obtain cod liver oil elsewhere, she is given a supply. And when the mother leaves, she is armed with various written directions, and with pamphlets prepared by the department and by the state and federal governments. She also has her next appointment date tucked in her handbag.

On a subsequent trip to the clinic, when the child is a little older, he is vaccinated against smallpox and inoculated to protect him from diphtheria. His mother brings him back to the clinic about once a month until he is a year old, three or four times during the second year, and thereafter twice a year until he is ready for kindergarten.

The lessons taught mothers at these clinics by private doctors and by the nurses on their rounds of the homes have done much toward

saving babies and making them healthier. Today deaths of children under five make up only one-twentieth of all deaths, instead of one-fifth as they did in 1915. Particularly significant is a drop in the infant mortality rate among Negro babies in the health district. Nearly a third more survive the first year of life now than in 1930.

Under regular medical and nursing supervision, hundreds of babies now progress to a sturdy, runabout age free from rickets and other nutritional diseases, protected against smallpox and diphtheria, and enter school at five or six years without serious defects. With them, society has met its primary obligation. Their right to live has been fulfilled.



APOSTLES OF HEALTH

DEEP in the creed of public health workers is faith that the people can be persuaded to help guard their own health. And so the department employs a full-time teacher and has a division which prepares posters and pamphlets, speeches, and exhibits. These in turn are carried to you by the department's nurses, doctors, and sanitary inspectors, by the newspapers and radio stations, the motion picture houses and stores, churches and schools, clubs and labor unions, police and firemen—all acting as apostles of health.

The general level of education in Westchester is probably as high as in any county in the United States, and most of its citizens know pretty well how to safeguard their health. But even among the well educated are many who let their health slide, through ignorance or neglect. The department seeks to awaken these people to their health opportunities, as well as to teach the county's comparatively few slum dwellers how to care for their babies and themselves.

For more than sixty years, Westchester has instructed as many of its people as possible in the needs of community health. Cleanliness was one of the first lessons taught. In 1879 a local health board shook a stern

finger at the citizenry: "All in town must be humiliated at the great child mortality unless an explanation of the facts can be discovered. During the last summer, a large number of infants died here from diseases peculiarly produced by bad sanitary surroundings." And one of the first health measures carried out was to improve the disposal of sewage.

As more was learned of the causes of disease and how to prevent it, the need grew great to get that knowledge out of the laboratory, into the heads and hands of every doctor in the remotest village, then out of the doctor's office into the home. We have seen how the first visiting nurses started teaching, almost in spite of themselves, as they cared for the sick poor.

The schools added health to their curricula and began hiring nurses about thirty years ago. In 1919 the Westchester County Tuberculosis and Public Health Association first sounded its words of warning and hope, and many other agencies, both voluntary and official, joined in the mission.

Ever since the county health department was organized, the many voluntary agencies have staunchly supported it. In turn, the department has developed various services in an effort to make all the units mesh, like the cogs of a giant machine.

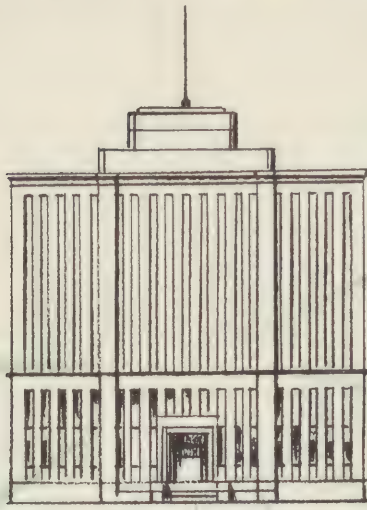
It established a speaker's bureau, and in 1940 members of the department made 153 talks. It borrows motion pictures and exhibits from the state and federal governments, and shows them before clubs, parent-teacher associations, church groups, and labor unions and in schools, factories, and stores. In 1940 the department filled 94 requests from these organizations.

Pamphlets and posters are received from the state, federal government, and voluntary agencies, and the department prepares a number of its own. In addition, the division of health education prepares articles for the press to inform the public on current health news and on how the department may serve it.

Since November 3, 1930, the department has published a magazine, *Westchester's Health*, further to inform the citizenry on "all matters



HEALTH EDUCATION



LIBRARY



EXHIBITS



MOTION
PICTURES



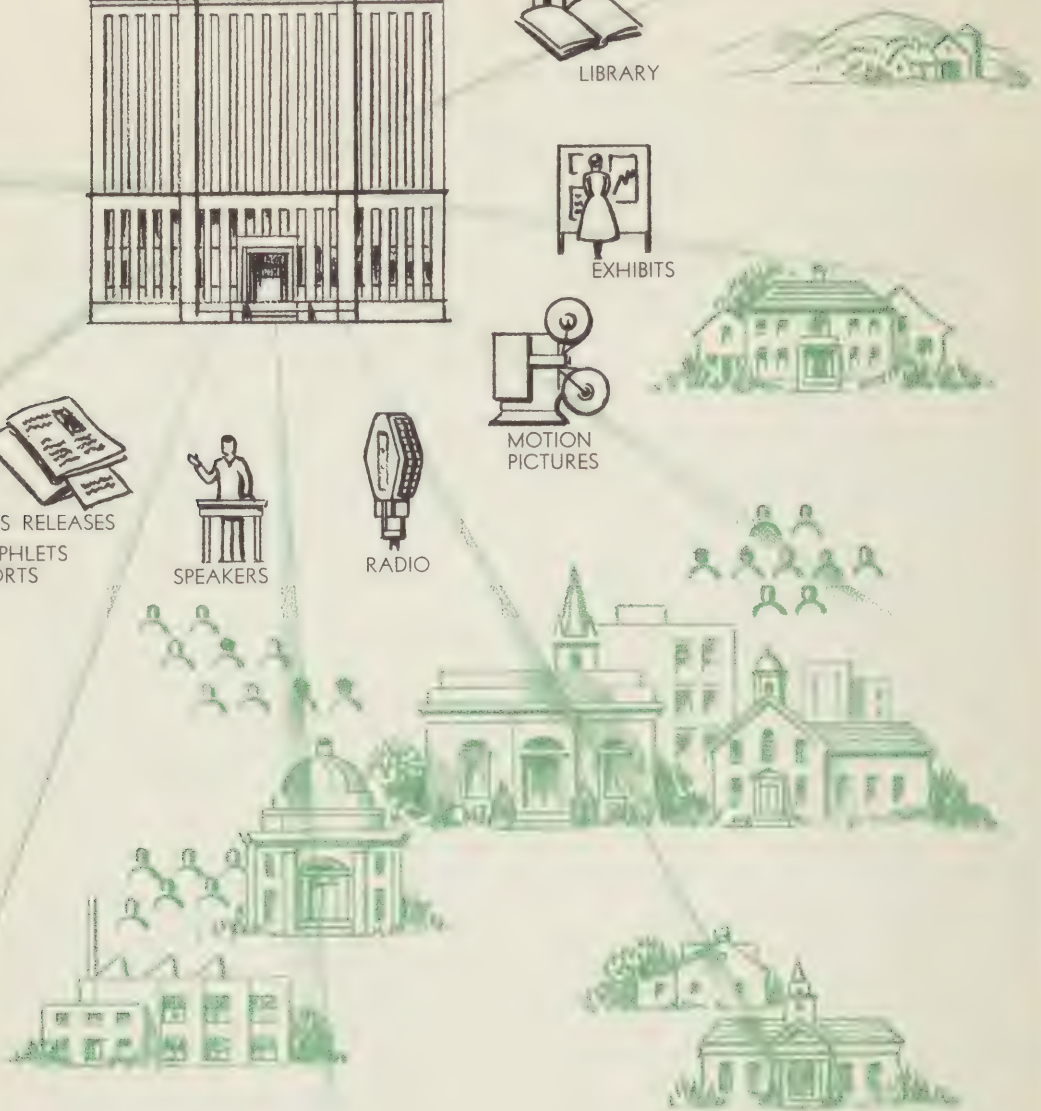
PRESS RELEASES
PAMPHLETS
REPORTS



SPEAKERS



RADIO



of importance relating to the health of Westchester County." This magazine began as a weekly, became a biweekly, and now is a monthly publication. It has a circulation of 2,066, made up chiefly of people especially interested in health work—such as doctors, dentists, nurses, social workers, teachers, welfare and court officials, clergymen, food handlers, and other citizens.

Each year until 1938 an annual report was issued, summarizing the department's work and giving the figures and charts which show the ground gained. Recently a department library was established, for the use of the public as well as the staff, and already a number of club women, high school students, and a few mothers are using the more than five hundred books, fifty magazines, and numerous monographs and reports it contains.

Keeping its own staff abreast of all the many new discoveries and developments is an important part of the department's teaching. To do this it holds monthly staff meetings, shows motion pictures, and teaches extension courses. Various members attend state and national health meetings, and take refresher courses.

Thus the various members of the staff are ready not only to apply the latest knowledge in healing and in safeguarding the community's health, but also in teaching the public to help them. In many ways—from personal contact through to the major publicity media—teaching has become a major task in health service. The swift advances of science, opening up new courses on the road to health, must be properly interpreted to the individuals they will benefit.

No health unit can operate effectively without the collaboration of the citizens it serves. For that reason, the department has attempted to organize a public education division which will stimulate your interest and keep you informed upon the problems and developments in public health today.



DOLLARS AND LIVES

THE death rate of infants—born alive but dead before they are a year old—is considered one of the best yardsticks to measure the health of a community. As we have seen, even ten years ago a baby born in Westchester had a better chance to live than if he had been born almost anywhere else in the nation. And yet more than one and a half times as many babies died in Westchester then as die in the health district today.

We have seen other great gains in the fights against typhoid fever, diphtheria, syphilis, childbed fever, and above all tuberculosis. A considerable part of this saving of lives and of suffering has come from the cooperation of the county health district with private doctors and other agencies. But—

Just what is the department's share of the district's health bill?

Less than a dollar a year for each resident of the district.

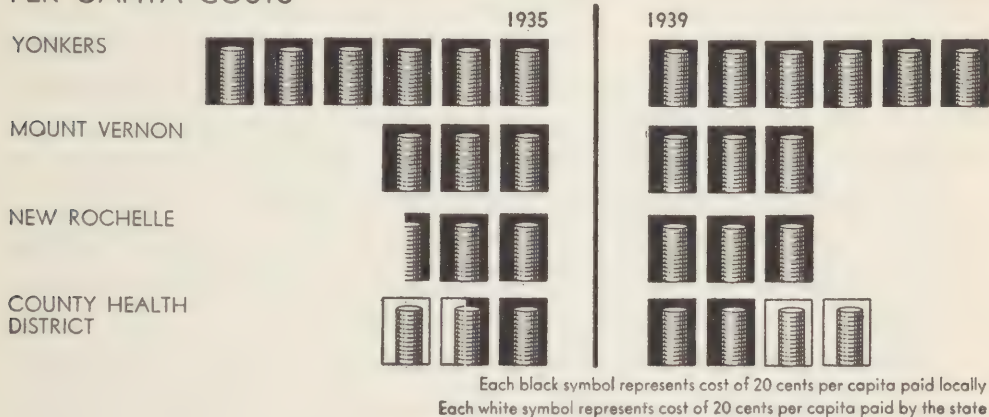
During ten years, it averaged 78 cents. It was 85 cents in 1939, and 87 cents in 1940. But only half these sums, representing the cost of running the county health department, came from county funds. The other half was paid by the state. Of course, state funds came from taxes, but

the state's share of the cost of running county health departments is paid from general funds, and does not appear on the taxpayer's bill for his local government.

In 1939, when citizens of the health district paid only 42.5 cents for 85 cents of health service, New Rochelle citizens paid 61 cents to run their health department, Mount Vernon, 68 cents, and Yonkers, \$1.23.

The year before the health district was organized, White Plains and the towns and villages which joined in the district spent \$121,500 for public health work, much of which was haphazard and poorly supervised. The amount they spent from funds raised by local taxes in 1939 was only \$135,200 in spite of an increase in population of 33,569 since 1930.

PER CAPITA COSTS



Organization and coordination have been the chief contributions of the county department to the health of the district. Through these devices, the county department is helping to bring you new developments as they come out of the laboratory. Medical and health knowledge has continued to snowball during the last ten years, and there is still a long, snowy slope ahead.

For example, there is sulfathiazole (one of the new sulfa compounds which may change profoundly the practice of medicine). Sulfathiazole offers great promise in the hitherto baffling problem of gonorrhea. Activi-

ties to control this disease have been limited because it is often difficult to cure, especially in women; and, as in syphilis, its mode of transmission complicates the search for sources of infection.

Indications are, however, that the new drug, sulfathiazole, will rapidly kill gonorrhea germs, and there is now hope that the plague will be eventually controlled.

Modern advances, moreover, give promise of eventual victory in the fight against tuberculosis, against syphilis, perhaps against pneumonia. By safety lessons, it is hoped to reduce further the number of fatal accidents.

There is high hope, too, of making appreciable dents, at least, in the lists of deaths from cancer and from heart diseases, particularly those following infection. Here, much as in the fight on tuberculosis and syphilis, the problem is early diagnosis and treatment.

Since January, 1940, doctors have been required to report cancer cases, and, working in cooperation with the Westchester Cancer Committee, the department has every expectation that more cases may be found and treated while there is still time. By encouraging heart examinations during convalescence from acute diseases the department hopes that weakened heart conditions may be found and attended to before they grow. It also expects to share in a new heart disease program inaugurated by the state department of health.

There is the prospect soon of a satisfactory vaccine for whooping cough, one of the most common of children's diseases. Great strides have been made in typing the germs which cause scarlet fever, septic sore throat, and erysipelas, as well as those causing typhoid fever. It was out of such research that serums for the various kinds of pneumonia were developed, and this research promises to prove as helpful. It will also give valuable aid in removing sources of infection.

To make full use of both old and new discoveries, however, the department needs a laboratory of its own—a basic need of any health department all authorities maintain. The department employs a private laboratory to analyze milk and water, while the state's branch laboratory in New York City provides the minimum legal requirements for diagnosis,

such as identifying the germs swabbed from the throat of a diphtheria suspect.

But sometimes more laboratory work than the minimum is indicated. And sending samples of germs to New York City delays diagnosis, besides taking considerable labor to pack specimens to meet the strict postal regulations set up to keep the germs from wandering off onto letters.

Pending the development of further new serums and vaccines, perhaps the most promising campaign is a flank attack against all the diseases at once—a campaign to build sounder and tougher bodies by teaching people what and how much to eat. Thousands have partially starved themselves for years by eating breads and other foods robbed of, or lacking in needed minerals and vitamins. During the last ten years discoveries of the relation of these food elements to health and disease—discoveries piling up dramatically and in rapid succession—have revolutionized our ideas of human food needs.

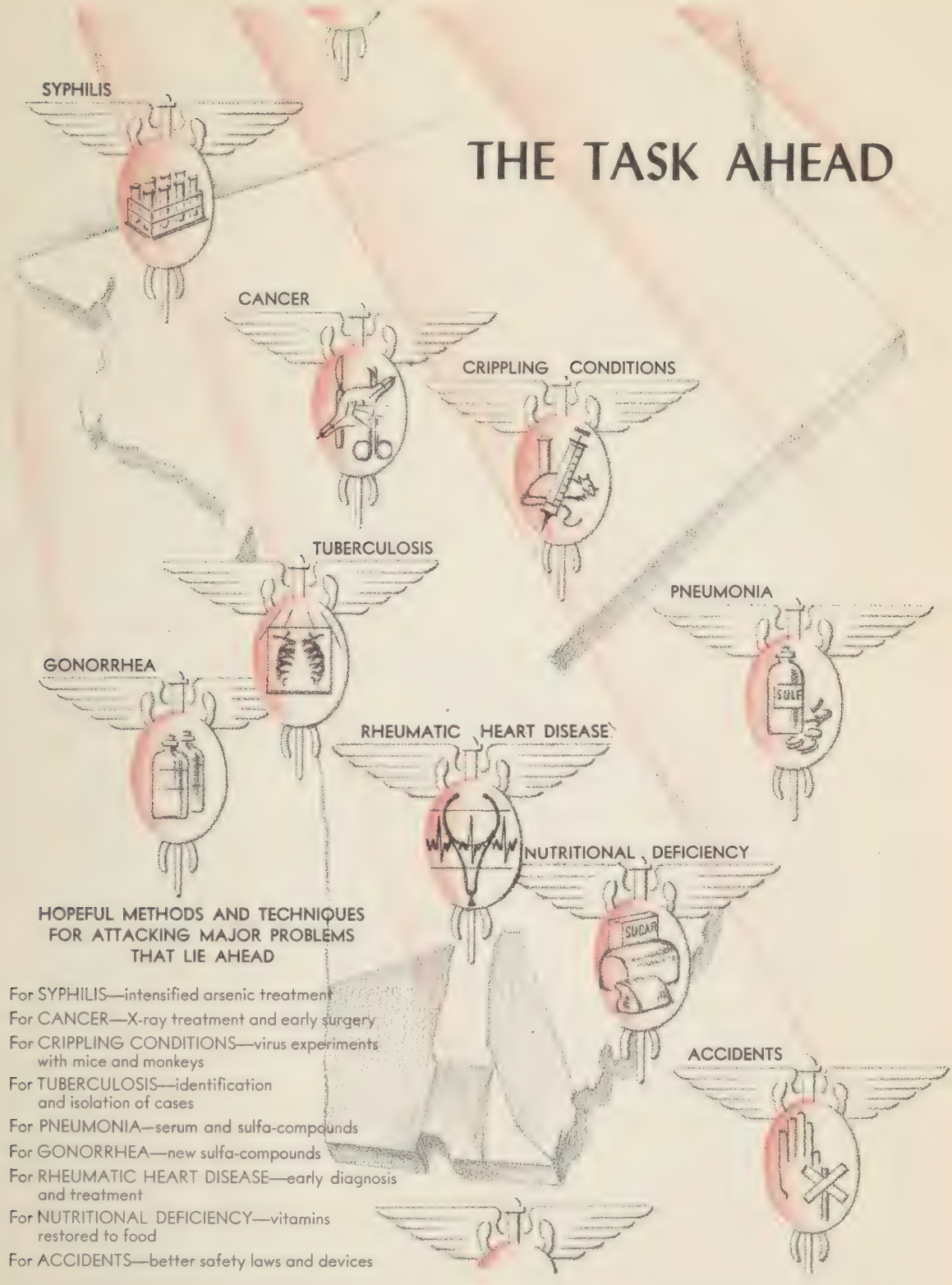
Indeed, there is a growing suspicion that nutrition may have more to do with communicable disease than has hitherto been supposed. It is hoped that in the years to come everyone may be taught to prepare, by eating properly, to defend himself against sickness and to improve health.

But, whatever may lie ahead in the course of public health, workers in this field may look back over the decade with a very real satisfaction.

Westchester is particularly fortunate that its health district was born and “grew-up” during this ten-year period. Through the instrument of organization, the county has striven to keep pace with the march of science—to match modern discoveries in medicine with new techniques in administration.

Guided by the experience of its first ten years, the district has entered its second decade full of confidence that with the continued help of Westchester’s private doctors, its other health agencies, and its individual citizens, it can reach the common goal of all of us—the best in community health.

THE TASK AHEAD



HOPEFUL METHODS AND TECHNIQUES FOR ATTACKING MAJOR PROBLEMS THAT LIE AHEAD

- For SYPHILIS—intensified arsenic treatment
- For CANCER—X-ray treatment and early surgery
- For CRIPPLING CONDITIONS—virus experiments with mice and monkeys
- For TUBERCULOSIS—identification and isolation of cases
- For PNEUMONIA—serum and sulfa-compounds
- For GONORRHEA—new sulfa-compounds
- For RHEUMATIC HEART DISEASE—early diagnosis and treatment
- For NUTRITIONAL DEFICIENCY—vitamins restored to food
- For ACCIDENTS—better safety laws and devices

MEMBERS OF
WESTCHESTER COUNTY BOARD OF HEALTH

1941

EDWIN G. RAMSDELL, M.D., *President*
NELSON A. ROCKEFELLER, *Vice-President*
J. RUSSELL FOSHAY, M.D.
RALPH A. McCLELLAND

CHARLES C. SWEET, M.D.
MISS RUTH TAYLOR
MISS JANE H. TODD
FREDERICK E. VAUGHAN, M.D.

FORMER MEMBERS OF
WESTCHESTER COUNTY BOARD OF HEALTH

*WILLIAM H. CANTLE, M.D., 1930-1932
*CHARLES F. CHAPMAN, M.D., 1930-1934
WILLIAM C. DUELL, 1936-1938
HERBERT C. GERLACH, 1930-1936

*I. RANDOLPH JACOBS, 1930-1932
MRS. BERTHA S. MOORE, 1930-1939
MRS. CAROLINE O'DAY, 1930-1931
*GEORGE J. WERNER, 1930-1931
(*Deceased)

STAFF OF
WESTCHESTER COUNTY DEPARTMENT OF HEALTH

1941

GEORGE H. RAMSEY, M.D., *Commissioner*

WILLIAM A. HOLLA, M.D.
First Deputy Commissioner

DOROTHY WORTHINGTON, M.D.
Maternal and Child Hygiene

EDWARD H. MARSH, M.D.
Deputy Commissioner

ANNE H. McCABE
Public Health Nursing

ALEXANDER D. LANGMUIR, M.D.
Deputy Commissioner

MARJORIE T. BELLOWES
Records and Statistics

EDWARD A. LANE, M.D.
Communicable Disease Control

RICHARD M. McLAUGHLIN
Sanitation

MARION McKINNEY
Health Education

JOHN H. KORN, M.D.
Tuberculosis

Former Commissioner

MATTHIAS NICOLL, JR., M.D., *Commissioner, 1930-1938*

Former Staff Members

RICHARD SLEE, M.D.
First Deputy Commissioner, 1930-1937

VIOLET H. HODGSON
Public Health Nursing, 1934-1935

JAMES L. BARRON
Sanitation, 1930-1938

ETHEL FRANCES MURRAY
Public Health Nursing, 1930-1933

EUGENE W. BOGARDUS, M.D.
Tuberculosis, 1932-1940

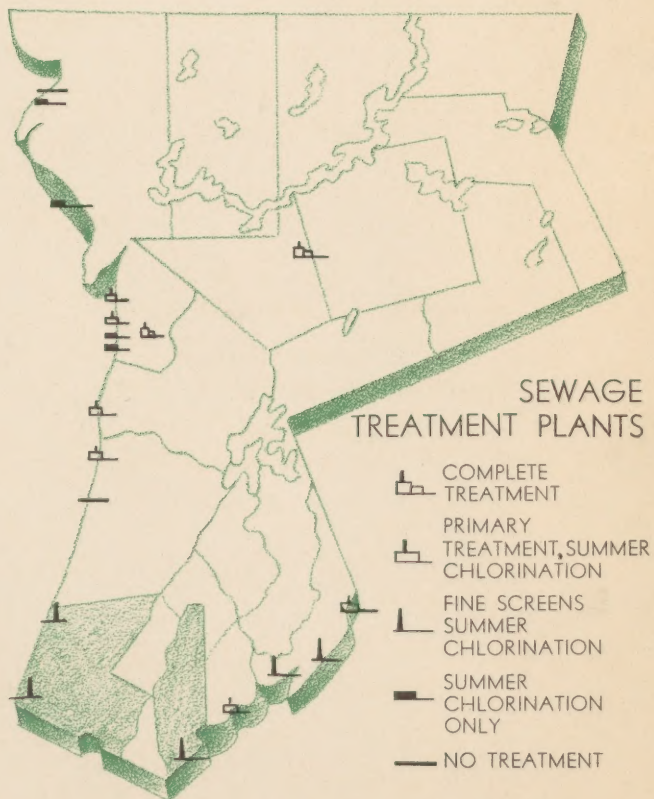
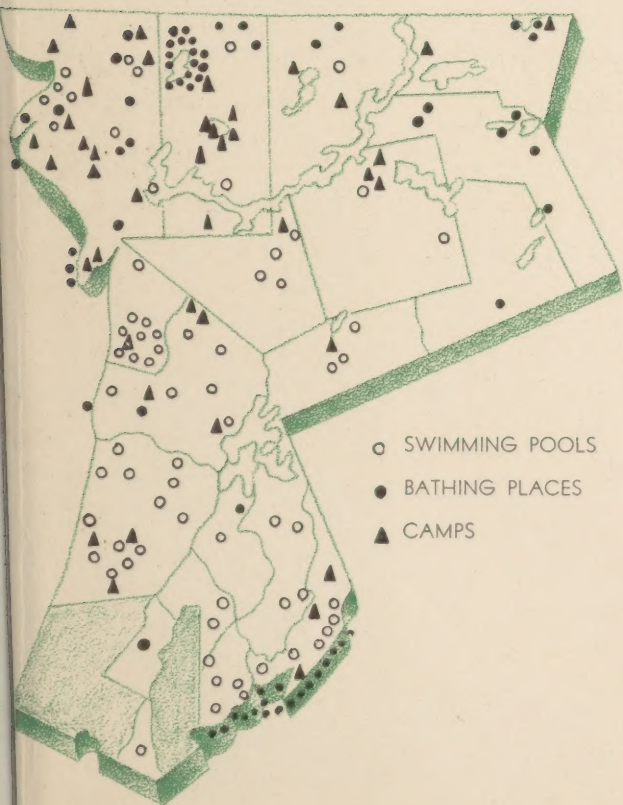
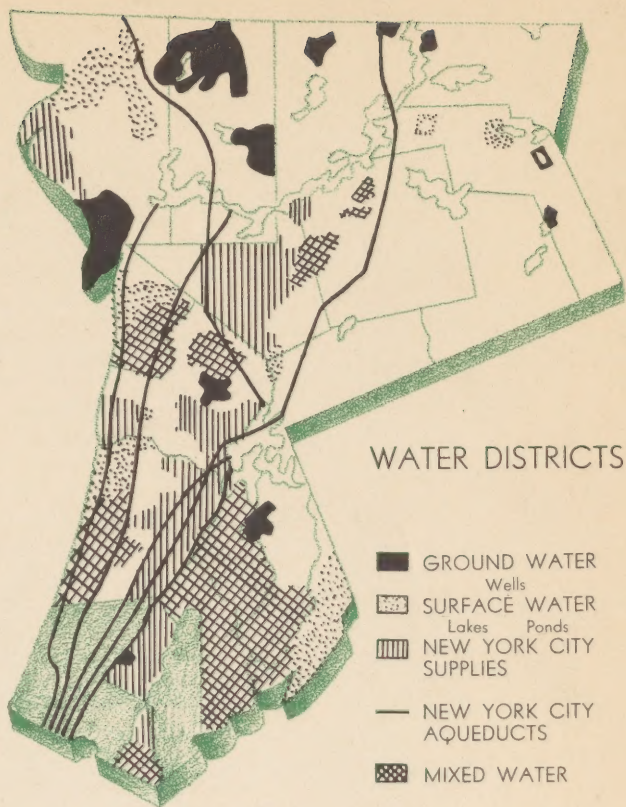
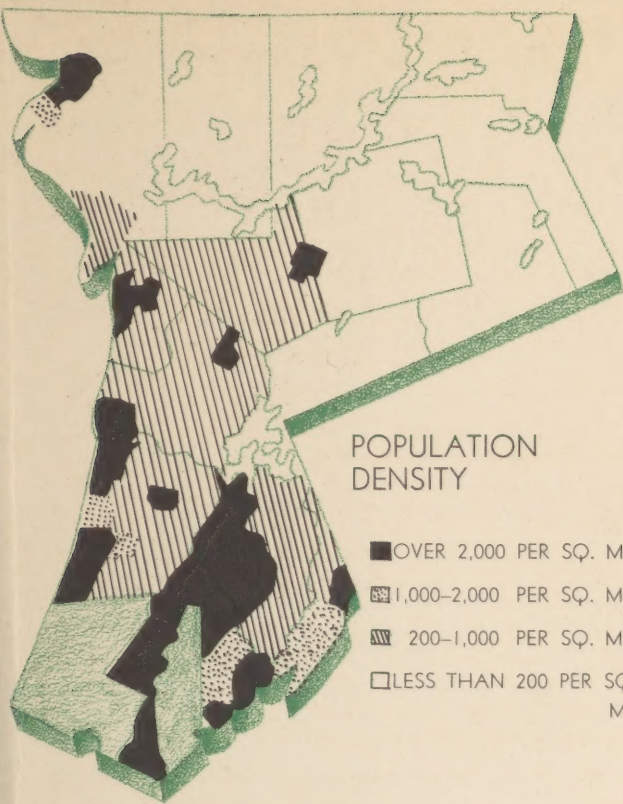
JOSEPH E. STROBEL, M.D.
Tuberculosis, 1930-1931

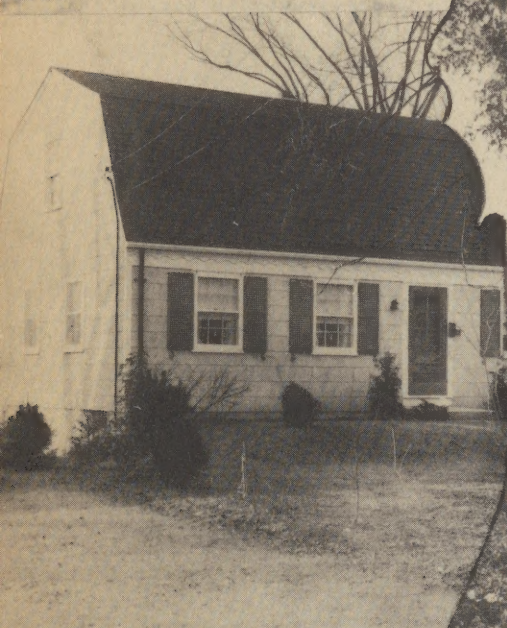
Prepared and designed for the Westchester County Department of Health by the RAYMOND RICH ASSOCIATES, of New York City, from materials and technical manuscript provided by Dr. George H. Ramsey and his staff.

Photographs by ELIOT ELISOFFON.

All figures for groups of years are annual averages unless otherwise indicated. Data upon which this report is based may be found in STATISTICAL REPORT, WESTCHESTER COUNTY DEPARTMENT OF HEALTH, 1930-1940 to be published by the Department in 1941.

This report has been prepared and printed at private expense.





IV 3744 ①